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ZONE 1 THE FAR NORTH: ALASKA, YUKON and NORTHWEST TERRITORIES. Coordinator: Kenelm W. Philip (KWP). Contributors: C. D. Ferris (CDF), M. L. Grinnell (MLG), R. E. Kirk (REK), N. G. Kondla (NGK), T. W. Kral (TWK), R. P. Meyer (RPM), J. Troubridge (JT), L. Troubridge (LT), M. E. Young (MEY), J. D. Zeligs (JDZ), and collectors for the Alaska Lepidoptera Survey. Previously unreported localities or species are emphasized. Note regarding Alaska Lepidoptera Survey: Ken Philip (along with C. D. Ferris, and J. & L. Troubridge through 24 June) spent 8 June through 5 July on the Dempster Highway, Yukon and Northwest Territories. Collecting was concentrated in the Ogilvie Mts (Windy Pass) and Richardson Mts (km 408, 411, 416, 423, 462 and 466), but some collecting was done at intermediate points, and one trip to Inuvik was made in late June. Summer weather on the Dempster Highway is notoriously undependable--but this summer produced a long spell of clear, warm (but occasionally windy) weather in June. Collecting conditions were much better than average, despite a few clear windy days in the Richardson Mts which kept butterflies down. The warmth accelerated the development of butterflies, and the flight season was compressed. For practical purposes the collecting season was over by the end of June.

NORTHWEST TERRITORIES. Weather: June was unusually hot and dry along the northern part of the Dempster Highway. Biotopes: From the YT/NWT border to about km 25 the road runs across the Richardson Mts (much of the time in a wide valley with expanses of tussock tundra, occasionally in narrow rocky gorges). From km 25 to the Peel River at km 75 the road gradually descends the east flank of the mountains through low shrub tundra. Between the Peel River and the Mackenzie River is rather flat (occasionally rolling) country with spruce and lakes. After crossing the Mackenzie River at Arctic Red River, the road is right down in the floor of the Mackenzie valley, and the landscape is dead flat and covered with *Eriophorum* tussocks and scattered small spruces. Around Inuvik there are some low hills with semi-open birch forest (the preferred habitat for *Erebia lafontainei*). All kilometer measurements are from the YT/NWT border at km 471, since the NWT section of the Dempster Highway has kilometer posts based on that point.

BUTTERFLIES: MACKENZIE VALLEY - Inuvik, Chuk Park territorial campground, 30 June, *Colias canadensis*, *Everes amyntula*, *Glaucopsyche lygdamus*, *Lycaeides idas*, *Plebejus saepiolus*, *Vacciniina optilete*, *Clossiana freija*, *C. chariclea*, *Erebia lafontainei* (worn), *Oeneis bore* (CDF,KWP). *E. lafontainei* was common for 20 miles south of Inuvik on 28 June (JT). EAST BASE RICHARDSON MTS - Midway Lake, km 44 (NWT) Dempster Highway, 30 June, *Papilio machaon*, *Colias canadensis*, *C. gigantea*, *Celastrina argiolus*, *Plebejus saepiolus*, *Proclossiana eunomia*, *Clossiana polaris*, *C. frigga*, *C. chariclea*, *Coenonympha kodiak*, *Erebia rossii*, *E. disa*, *Oeneis bore*, *O. polixenes* (CDF,KWP). Km 35 (NWT) Dempster Highway, 30 June, *Papilio machaon*, *Colias canadensis*, *C. gigantea*, *C. palaeno*, *Proclossiana eunomia*, *Clossiana polaris*, *C. frigga*, *C. chariclea*, *Erebia rossii*, *E. disa*, *E. discoidalis*, *E. fasciata*, *Oeneis bore* (CDF,KWP). Km 16 (NWT) Dempster Highway, 14, 29 June, *Clossiana frigga*, *C. chariclea*, *Erebia rossii*, *E. fasciata*, *Oeneis bore*, *O. polixenes* (?) (CDF,KWP). Km 13 (NWT) Dempster Highway, 22 June, *Pyrgus centaureae*, *Papilio machaon*, *Colias hecla*, *Clossiana polaris*, *C. frigga*, *C. freija*, *C. chariclea*, *Erebia rossii*, *E. disa*, *Oeneis bore* (NGK).

MOths: During the entire drive to and from Inuvik on 29-30 June, after dropping down into the Mackenzie valley at the Peel river, we (CDF,KWP) kept seeing large orange lepidoptera flying across the road. Not until one was captured at km 423 (Yukon Territory) were we able to determine that we had been seeing *Platarctia parthenos*, which must have been rather abundant.

YUKON TERRITORY: Weather: Again, a long hot, dry spell in June accelerated the butterfly season, and in the Ogilvie and Richardson Mts the collecting season for the summer consisted of the month of June--period. At some point below the beginning of the Dempster Highway the relatively stable polar high ended, and conditions from there on south were quite different. New Yukon record, *Xestia woodi* (Noctuidae) from km 466 Dempster Highway. Life history - More evidence has emerged showing that *Oeneis excubitor* breeds in bogs, and then flies to hilltops (rather than being a real inhabitant of



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the rocky hillsides as *O. melissa* is). Specimens were captured right by the roadside at Windy Pass, the Eagle River, and km 408 at the west foot of the Richardson Mts. Habitats were, respectively, flat gravel pit in tussock tundra with willow thickets; open spruce bog; and tussock tundra. It should also be noted here that the absence of this species at Windy Pass in 1985 appears to have been a response to the poor weather during the summer of 1984 rather than any evidence of alternate-year flights. *O. excubitor* was caught at Windy Pass in 1983 and 1984, but 9 collectors in 1985 saw no sign of it. A report from Michael Young (which I had overlooked when preparing the 1986 Season Summary) showed that *O. excubitor* was present at Windy Pass in 1986 on 3 July, and it was abundant there in 1987 on 22-23 June. New collecting sites - Km 207.8 Dempster Highway is a side road to a gravel pit in the Ogilvie River valley, passing through a lush open area with flowery banks along the road--excellent taiga collecting! Km 264 Dempster Highway is about 100 yards from a small scree slope which supports a dense population of *Clossiana distincta*. Three gravel pits along the west base of the Richardson Mts (km 411, 416, and 423), provide easy access to lush arctic tundra slopes and shale scree, with excellent collecting. The only problem with these sites is that the smoothed rounded contour of the Richardson Mts provides little shelter from the strong winds that often occur here.

BUTTERFLIES: ARCTIC COAST - Blow River near Shingle Point, 7 July, *Colias hecla*, *C. canadensis*, *Clossiana chariclea*, *Erebia disa*, *E. youngi* (JT). NORTHERN RICHARDSON MTS - Skull Ridge, about 14 miles east of Mt Fitton, 7 July, *Colias philodice*, *C. hecla*, *C. palaeno*, *Agriades rustica*, *Clossiana distincta*, *Erebia mackinleyensis*, *Oeneis melissa* (JT). White Mts (between Bell River and the YT/NWT border, at headwaters of Fish Creek), 29 June to 10 July, *Pyrgus centaureae*, *Hesperia comma*, *Parnassius evermanni*, *Papilio machaon*, *Pontia occidentalis*, *Artogeia napi*, *Colias hecla*, *C. canadensis*, *C. nastes*, *C. palaeno*, *Lycaeides idas*, *Plebejus saepiolus*, *Vacciniina optilete*, *Agriades rustica*, *Boloria napaea*, *Clossiana improba*, *C. polaris*, *C. freija*, *C. natarazhati*, *C. distincta*, *C. chariclea*, *Coenonympha kodiak*, *Erebia rossii*, *E. disa*, *E. mackinleyensis*, *E. fasciata*, *E. discoidalis*, *E. youngi*, *E. lafontainei*, *E. occulta*, *Oeneis uhleri*, *O. bore*, *O. melissa*, *O. polixenes* (JT). Mt Russell, McDougall Pass (Little Bell River, just west of YT/NWT border), 9 July, *Colias palaeno*, *Agriades rustica*, *Clossiana improba*, *C. distincta*, *C. chariclea*, *Erebia mackinleyensis*, *Oeneis bore*, *O. jutta*, *O. melissa*, *O. excubitor* (JT). PORCUPINE RIVER - Hill at 67°32'N, 138°20'W, 7 July, *Colias hecla*, *C. nastes*, *Agriades rustica*, *Clossiana distincta*, *Erebia mackinleyensis*, *E. youngi*, *Oeneis melissa* (JT). RICHARDSON MTS - Km 466 Dempster Highway, 14, 18-21, 29 June, additional species (see 1985 Season Summary), *Pontia occidentalis*, *Colias canadensis*, *Clossiana frigga*, *C. freija*, *Oeneis melissa*, *O. polixenes* (CDF, M.G., REK, NGK, TWK, KWP). Km 462 Dempster Highway, 14, 20-21, 29 June, *Artogeia napi*, *Colias nastes*, *C. palaeno*, *Agriades rustica*, *Boloria napaea*, *Procllossiana eunomia*, *Clossiana improba*, *C. polaris*, *C. freija*, *C. distincta*, *C. chariclea*, *Erebia rossii*, *E. disa*, *E. mackinleyensis*, *E. fasciata*, *E. youngi*, *E. occulta*, *Oeneis bore*, *O. melissa*, *O. polixenes* (CDF, NGK, KWP). Km 452 Dempster Highway, 20 June, *Colias hecla*, *Glaucopsyche lygdamus*, *Clossiana polaris*, *Erebia rossii*, *E. disa*, *E. fasciata*, *E. discoidalis*, *Oeneis polixenes* (NGK). Km 431 Dempster Highway, 20 June, *Colias nastes*, *Clossiana polaris*, *Erebia rossii*, *E. fasciata*, *E. youngi*, *E. occulta*, *Oeneis melissa*, *O. polixenes* (NGK). Km 423 Dempster Highway, 30 June-1 July, *Pyrgus centaureae*, *Hesperia comma*, *Papilio machaon*, *Pontia occidentalis*, *Colias nastes*, *C. palaeno*, *Lycaeides idas*, *Vacciniina optilete*, *Agriades rustica*, *Procllossiana eunomia*, *Clossiana polaris*, *C. chariclea*, *Polygonia faunus*, *Erebia rossii*, *E. disa*, *E. mackinleyensis*, *E. youngi*, *E. occulta*, *Oeneis uhleri*, *O. bore*, *O. melissa*, *O. excubitor*, *O. polixenes* (CDF, M.G., REK, NGK, TWK, KWP). Km 413 Dempster Highway, 20, 22 June, *Pyrgus centaureae*, *Papilio machaon*, *Glaucopsyche lygdamus*, *Clossiana polaris*, *Erebia rossii*, *E. fasciata*, *E. discoidalis*, *E. youngi*, *Oeneis bore*, *O. polixenes* (NGK, KWP). Km 411 Dempster Highway, 7-9, 11-14, 17-25 June, 2 July, additional species [see Season Summary 1985 (there called Km 412)], *Pyrgus centaureae*, *Parnassius evermanni*, *Euchloe creusa*, *Celastrina argiolus*, *Glaucopsyche lygdamus*, *Lycaeides idas*, *Polygonia gracilis*, *Erebia disa*, *E. mackinleyensis*, *E. occulta*, *Oeneis polixenes* (CDF, M.G., REK, NGK, TWK, KWP, J<). Km 416/411 Dempster Highway, 19-25 June, *Everes amyntula* (TWK). Km 408 Dempster Highway, 20 June, additional species (see 1985 Season Summary), *Euchloe creusa*, *Erebia rossii*, *E. fasciata*, *Oeneis polixenes* (KWP, J<). EAGLE RIVER - Eagle River at km 373 Dempster Highway, 6-7, 11, 14-17, 23 June, 2 July, additional species (see 1985 Season Summary), *Papilio machaon*, *Colias canadensis*, *Nymphalis antiopa*, *Polygonia gracilis*, *Coenonympha kodiak* (CDF, KWP). *Oeneis excubitor* was again found here, in spruce bog habitat. EAGLE PLAINS - Km 270.5 Dempster Highway, 10, 21, 23-24 June, additional species (see 1985 Season Summary), *Pyrgus centaureae*, *Celastrina argiolus*, *Oeneis bore* (CDF, KWP). *Clossiana distincta* and *Oeneis excubitor* were both present on this hilltop. Km 264 Dempster Highway, 24 June, 2 July, *Colias palaeno*, *Agriades rustica*, *Clossiana distincta*, *C. chariclea*, *Oeneis bore* (CDF, KWP). This small patch of scree near the highway had a dense population of *C. distincta*. OGILVIE RIVER - Km 207.8 Dempster Highway, 9-10, 21, 23-24 June, 2 July, *Erynnis afraanius*, *Hesperia comma*, *Pontia occidentalis*, *Artogeia napi*, *Colias philodice*, *C. canadensis*, *C. nastes*, *C. gigantea*, *C. palaeno*, *Everes amyntula*, *Celastrina argiolus*, *Glaucopsyche lygdamus*, *Lycaeides idas*, *Plebejus saepiolus*, *Procllossiana eunomia*, *Clossiana frigga*, *C. freija*, *C. chariclea*, *Phyciodes pratensis*, *Polygonia faunus*, *Nymphalis antiopa*, *Coenonympha kodiak*, *Erebia rossii*, *E. disa*, *E. discoidalis*, *E. theano*, *Oeneis bore*, *O. jutta*, *O. polixenes* (CDF, KWP). OGILVIE MTS - Windy Pass, 8-9, 14-17, 21-23 June, 3 July, additional species (see 1985 Season Summary), *Euchloe ausonides* (CDF, M.G., REK, NGK, TWK, KWP, J<). *Oeneis excubitor* was present this summer in large numbers at Windy Pass, peaking 22-23 June, and was found both by the roadside and (in larger numbers) on hilltops. Km 134 Dempster Highway, 17 June, *Pontia occidentalis*, *Artogeia napi*, *Euchloe creusa*, *Euchloe* sp., *Glaucopsyche lygdamus*, *Clossiana polaris*, *C. freija*, *Erebia rossii*, *E. disa*, *E. discoidalis*, *Oeneis bore*, *O. melissa* (NGK). North Fork Pass, km 82.5 Dempster Highway, 4 July, additional species (see 1973, 1981, 1984 Season Summaries), *Pyrgus centaureae*, *Euchloe ausonides*, *Colias canadensis*, *Clossiana improba*, *Erebia mackinleyensis* (CDF, KWP). *Colias hecla* and *Erebia theano* were, as usual, common in the stream gully to the east of the road, and an occasional *E. lafontainei* was encountered there as well. NORTH FORK KLONDIKE RIVER - Tombstone Campground, 3-4 July 1979/1985, *Papilio machaon*, *Pontia occidentalis*, *Artogeia napi*, *Euchloe ausonides*, *Colias philodice*, *C. interior* (!), *C. palaeno*, *Plebejus saepiolus*, *Vacciniina optilete*, *Procllossiana eunomia*, *Clossiana frigga*, *C. polaris*, *C. freija*, *C. distincta*, *C. chariclea*, *Polygonia gracilis*, *Erebia theano*, *E. lafontainei*, *Oeneis bore* (NGK). Bensen Creek, km 29 Dempster Highway, 4 July, *Erynnis afraanius*, *Pterourus glaucus*, *Artogeia napi*, *Colias philodice*, *C. gigantea*, *C. palaeno*, *Glaucopsyche lygdamus*, *Lycaeides idas*, *Plebejus saepiolus*, *Phyciodes pratensis*, *Limenitis arthemis*, *Oeneis bore*, *O. jutta* (CDF, KWP). YUKON HIGHWAY 9 (Top of the World Highway) - Km 65 west of Dawson, 4 July 1986, *Colias palaeno*, *Clossiana distincta*, *Oeneis melissa* (MEY). Km 5 east of Alaska/YT border, 7 July 1985, *Artogeia napi*, *Clossiana polaris*, *Erebia fasciata*, *E. lafontainei* (NGK). YUKON HIGHWAY 11 - west of Mayo, 4-5 July, *Erynnis afraanius*, *Artogeia napi*, *Pterourus glaucus*, *Euchloe ausonides*, *Colias philodice*, *C. palaeno*, *Glaucopsyche lygdamus*, *Clossiana freija*, *C. titania*, *Phyciodes pratensis*, *Occidryas anicia*, *Polygonia faunus*, *Limenitis arthemis*, *Erebia disa*, *Oeneis chryxus*, *O. bore*, *O. jutta*, *O. polixenes* (CDF). YUKON HIGHWAY 2 - Lake Laberge, 13-14, 28, 30 June-1 July, *Erynnis persius*, *Hesperia comma*, *Polites draco*, *Parnassius phoebus*, *Euchloe ausonides*, *Colias philodice*, *C. christina*, *C. gigantea*, *Everes amyntula*, *Glaucopsyche lygdamus*, *Plebejus saepiolus*, *Agriades rustica*, *Occidryas anicia*, *Oeneis chryxus*, *O. jutta*

(MLG,NGK,REK). KLUANE LAKE - Alaska Highway km 1797, 'Kluane Village'. 30 June, Polites draco, Colias hecla, C. palaeno, Occidryas anicia, Coenonympha kodiak, Erebia disa, E. epipsodea, Oeneis jutta (MLG,REK). Nickel Creek (access via Quill Creek road), 27 June-6 July, additional species (see 1982 Season Summary), Polites draco, Hesperia comma, Parnassius evermanni, Euchloe ausonides, Colias canadensis, Clossiana polaris, C. distincta, Nymphalis antiopa, Erebia discoidalis, E. epipsodea, Oeneis jutta, O. polixenes (MLG,REK,TWK). Grinnell reports that mining operations are becoming more intensive on the road to Nickel Creek, and access could become more difficult in the future. Duke River, Alaska Highway km 1768, 6 July, additional species (see 1979 Season Summary, and note change in highway mileage), Colias christina, Oeneis chryxus (MLG,REK,TWK). TAHKINI RIVER - Kusawa Lake, via Kusawa Lake road (Alaska Highway km 1539), 7 July 1985, Erynnis persius, Hesperia comma, Polites draco, Pterourus glaucus, Colias philodice, C. christina, Everes amyntula, Lycaeides idas, Speyeria mormonia, Phyciodes pratensis, Erebia epipsodea, Oeneis jutta (NGK). YUKON HIGHWAY 7 - Tarfu Lake, Atlin road, 29 June, Erynnis persius, Hesperia comma, Parnassius phoebus, Artogeia napi, Euchloe ausonides, Colias philodice, Plebejus saepiolus, Phyciodes pratensis, Oeneis chryxus (NGK).

MOHIS: ARCTIC COAST - Blow River near Shingle Point, 7 July, Sympistis lapponica [Noctuidae] (JT). NORTHERN RICHARDSON MTS - Skull Ridge, about 14 miles east of Mt Fitton, 7 July, Polia richardsoni [Noctuidae] (JT). White Mts (between Bell River and the YT/NWT border, at headwaters of Fish Creek), 1-3 July, Gynaephora rossii [Lymantriidae], Polia richardsoni, Parabarrovia keelei, Sympistis zetterstedti, S. heliophila, S. lapponica, S. funesta [Noctuidae] (JT). PORCUPINE RIVER - Hill at 67°32'N, 138°20'W, 6 July, Synedroida petricola, Lasionycta leucocycla albertensis [Noctuidae] (JT). RICHARDSON MTS - Km 466 Dempster Highway, 27 June, 12 July, Dodia kononenkoi [Arctiidae], Xestia woodi [Noctuidae] (JT). Km 423 Dempster Highway, 1 July, Platarctia parthenos [Arctiidae] (KWP). Km 411 Dempster Highway, 15-19 June, Acsala anomala [Arctiidae] (very abundant), Anarta cordigera, A. melanopa, Sympistis zetterstedti, Trichosilia boreana [Noctuidae] (JT). OGILVIE MTS - Windy Pass, 7 June, Pararctia yarrowi, Acsala anomala [Arctiidae], Gynaephora groenlandica [Lymantriidae], Sympistis lapponica [Noctuidae] (JT). Km 141 Dempster Highway, 14 July, Platarctia parthenos [Arctiidae] (JT).

ALASKA: Weather (Interior): An early spring was followed by a hot and dry June, producing one of the lowest mosquito populations in Interior Alaska that anyone can remember! The long hot spell broke in early July, and the rest of July was cloudy and wet.

BUTTERFLIES: BROOKS RANGE - Slope Mountain (Dalton Highway), 3 July, Parnassius evermanni, Papilio machaon, Artogeia napi, Euchloe creusa, Colias hecla, C. canadensis(?), C. thula, C. nastes, C. gigantea, C. palaeno, Lycaeides idas, Vacciniina optilete, Agriades rustica, Boloria napaea, Procllossiana eunomia, Clossiana frigga, C. improba, C. freija, C. chariclea, Coenonympha kodiak, Erebia rossii, E. disa, E. theano, E. youngi, E. lafontainei, Oeneis bore, O. polixenes (JDZ). Trevor Creek (Dalton Highway), 4 July, Artogeia napi, Colias hecla, C. canadensis(?), C. palaeno, Lycaeides idas, Boloria napaea, Clossiana freija, C. chariclea, Erebia rossii, E. theano, E. lafontainei, Oeneis polixenes (JDZ). Atigun Pass (Dalton Highway), 4 July, additional species (see 1979 Season Summary), Artogeia napi, Clossiana freija, Erebia rossii, E. occulta (JDZ). Chandalar Shelf (Dalton Highway), 2, 4 July, additional species (see 1979 Season Summary), Euchloe creusa, Colias canadensis(?), C. thula (JDZ). Mile 236.9 Dalton highway (base of Chandalar Shelf), 30 June, Papilio machaon, Colias nastes, Clossiana polaris, C. freija, C. chariclea, Erebia rossii, E. fasciata, E. lafontainei, Oeneis bore, O. polixenes (JDZ). Mile 179 Dalton Highway (Marion Creek campsite), 5 July, Erynnis persius, Hesperia comma, Colias canadensis(?), C. palaeno, Everes amyntula, Lycaeides idas, Vacciniina optilete, Clossiana chariclea, Coenonympha kodiak, Oeneis jutta (JDZ). SEWARD PENINSULA - Teller Road, mile 18, 7 July, additional species (see 1976, 1979, 1980, 1981, 1986 Season Summaries), Procllossiana eunomia (JDZ). Council Road, mile 41.3, 8 July, additional species (see 1979, 1981, 1986 Season Summaries), Lycaeides idas (JDZ). Kougarak Road, mile 78, 12 July (rockslide habitat), Colias hecla, C. palaeno, Clossiana chariclea, Coenonympha kodiak, Oeneis bore, O. melissa (JDZ). INTERIOR ALASKA - Steese Highway, mile 143, 28 June, Colias gigantea, C. palaeno, Limenitis arthemis, Phyciodes pratensis (JDZ). Albert Creek, mile 131.3 Steese Highway, 28 June, Hesperia comma, Colias gigantea, C. palaeno, Everes amyntula, Vacciniina optilete, Limenitis arthemis, Procllossiana eunomia, Clossiana chariclea, Erebia disa (JDZ). Eagle Summit, 17, 21, 27-28 June, 3 July, no additional species, but Meyer noted that most of the 15 species he collected on 3 July were fresh, with Colias hecla and Boloria napaea (late-emerging species) flying with Pontia occidentalis and Erebia youngi (early species). This was probably due to the hot spell and its acceleration of the butterfly season, as was also observed at the same time on the Dempster Highway--but note that the 1979 Eagle Summit field trip at the Lep. Soc. meeting turned up 29 species on 2 July, including all of the above. Wickersham Dome, mile 30 Elliott Highway, 16, 19 June, additional species (see 1986 Season Summary), Parnassius evermanni, Colias palaeno, Clossiana polaris, C. chariclea, Erebia fasciata, Oeneis bore, O. jutta, O. melissa (JDZ). [Note: Wickersham Dome was collected (KWP) in 1982, and E. fasciata was present and O. melissa was common--but C. polaris was not seen (nor was it expected on an even-numbered year). Additional species obtained in 1982 were Euchloe ausonides, Celastrina argiolus, Procllossiana eunomia.] Taylor Highway, mile 141.5, 7 June, Parnassius evermanni (KWP).



ZONE 2 PACIFIC NORTHWEST: IDAHO, OREGON, WASHINGTON, BRITISH COLUMBIA. Coordinator: Jon H. Shepard (JHS). Contributors: C. R. Crowe (CRC), Nelson Curtis (NC), Erik Ervest (EE), C. D. Ferris (CDF), John Hinchliff (JH), Norbert Kondla (NK), Gary Lindberg (GL), John T. McBurney (JTM), Ann Musache (AM), June & Floyd Preston (J/FP), Robert M. Pyle (RMP), Thea L. Pyle (TLP), Steve Summers (SS), Robin Wahl (RW), Wayne Wehling (WW). General Collecting Conditions: Good early, late and mid season throughout the ZONE. This was an exceptional year for abundant species, although some species flew earlier than usual.

MIGRATORY SPECIES: D. plexippus not noted north of extreme southern Washington (WW,RMP) except Whatcom Co, WN. N. californica more abundant than last year with JHS, WW, CDF, GL, J/FP & SS reporting it throughout the Zone from the southern Oregon border to southern B.C., moving on into Alberta (NK). Vanessa virginiensis reported in several localities - OR, Cape Perpetua, Lincoln Co, 28 Sept, COUNTY (GL); WN, T10N R7W S17, Wahkiakum Co, 17, 21 Sept & 17, 18 Oct (RMP), and Jensen Point, Long Island, Pacific Co, 1 Oct, COUNTY (TLP), & Ecola State Park, Clatsop Co, 5 Oct, COUNTY (AM).

IDAHO. JTM found Spring collecting in Kootenai Co good. CDF reported good collecting in Boundary, Idaho and Nez Perce Counties. Lemhi Co was reduced (CDF). Blaine Co good until rains came in mid July (J/FP).

BUTTERFLIES: E. afraanius, 3 mi WSW of Soldier Meadow Reservoir, 5000', NEZ PERCE Co, 29 May (CDF); L. cupreus, 3 mi WSW of Soldier Meadow Reservoir, 5000', NEZ PERCE Co, 29 May (CDF); P. oreas silenus, Canyon Creek & Hwy 12, Idaho Co, 12 July (CDF); E. epipsodea, 3 mi WSW of Soldier Meadow Reservoir, 5000', NEZ PERCE Co, 29 May (CDF).

OREGON. JH again organized the Oregon records with contributions from many sources. Collecting was very good this year. J/FP added some observations.

BUTTERFLIES: *P. ruralis*, 4 mi S of Sumner, COOS Co, 7 May (JH); *H. comma oregonia*, Portland, MULTNOMAH Co, 12 Nov (GL); *O. sylvanoides*, Glenwood, WASHINGTON Co, 9 Aug (CRC); *B. philenor*, Miller Island, KLAMATH Co, 25 APRIL (SS); *P. zelicaon*, 1 mi NW of Fairview, COOS Co, 7 May (JH); *P. eurymedon*, 1 mi S of Fairview, COOS Co, 1 May (JH); *P. n. marginalis*, 4 mi S of Sumner, COOS Co, 7 May (JH) & Rainy Lake Rd, HOOD RIVER Co, 23 April (JH); *E. h. hyantis*, Stuckel Mtn, KLAMATH Co, May (SS); *C. occidentalis*, vic. Pilot Rock, JACKSON Co, 22 June (SS); *C. lemberti*, a population explosion on the South slope of Mt Ashland, Jackson Co, 4 June, nectaring on Pussytoes despite very strong cold winds (J/FP); *C. dumetorum*, 4 mi SE of Sumner, COOS Co, 7 May (JH); *G. gorgon*, Topsy Grade, Klamath R., KLAMATH Co, 13 June (SS); *C. rubidus*, 6 mi E of Mitchell, WHEELER Co, 1 July (NC,WW); *E. amyntula*, 18 mi W of John Day, GRANT Co, 2 Aug (WW); *P. i. ricei*, Larch Mtn, MULTNOMAH Co, 15 July (GL); *P. shasta*, 6 mi E of Mitchell, WHEELER Co, 1 July (NC,WW); *S. c. leto*, 4 mi W of Juntura, MALHEUR Co, 6 June (JH); *S. h. rhodope*, Glenwood, WASHINGTON Co, 9 Aug (CRC); *S. z. gloriosa*, fresh q's along Illinois River Rd, Josephine Co, 1, 2 July (J/FP); *P. mylitta*, Rainy Lake Rd, HOOD RIVER Co, 23 April (JH); *A. milberti*, Scaponia Park, COLUMBIA Co, 27 Sept (CRC); *N. californica*, Rogue R. mouth, CURRY Co, 30 Sept (SS); *L. archippus*, Field Cr, 18 mi W of John Day, GRANT Co, 2 July (NC,WW).

WASHINGTON. NC, RMP, and WW reported with additional County records for extreme SW and SE of the state. JTM had good early collecting in Spokane Co, getting the expected species.

BUTTERFLIES: *E. icelus*, Rattlesnake Grade, ASOTIN Co, 3 May (WW); *P. ruralis*, Oak Point Rd, 1 mi N of Cape Horn, WAHIAKUM Co, 26 April (RMP); *P. sabuleti*, Miller Point, Gray's River, T10N R8W S32, WAHIAKUM Co, 1 Aug (EE); *P. c. ?shepardi*, Rattlesnake Grade, ASOTIN Co, 3 May (WW); *P. eurymedon*, Gray's River, T10N R7W S17, WAHIAKUM Co, 26 April, EARLY (RMP); *C. eurytheme*, Gray's River, T10N R7W S17, Wahkiakum Co, 28 Nov, LATE (TLP); *N. menapia*, Hendrickson Canyon, Wahkiakum Co, T10N R8W S10, most WESTERN record, 10 Sept (TLP); *I. mossii*, Anatone Butte, ASOTIN Co, 26 April (WW) & Rattlesnake Grade, Asotin Co, 3 May (WW); *C. sheridanii*, Anatone Butte, ASOTIN Co, 26 April (WW) & Rattlesnake Grade, Asotin Co, 3 May (WW); *E. amyntula*, Anatone Butte, ASOTIN Co, 26 April (WW); *S. zerene*, Elokom River Rd, .7 mi above West Fork Jct, T10N R5W S26, WAHIAKUM Co, 19 Aug (RMP); *E. e. edithana*, Smoothing Iron Ridge, ASOTIN Co, 9 May (WW); *N. californica*, Anatone Butte, ASOTIN Co, 26 April (WW) & 2 mi S of Maytown, Hwy I-5, THURSTON Co, 23 Sept (GL); *V. anabella*, Gray's River, T10N R7W S17, Wahkiakum Co, 13 April, EARLY (RMP); *L. lorquini*, Palouse Falls State Park, FRANKLIN Co, 11 May (WW); *D. plexippus*, Gray's River, T10N R7W S17, WAHIAKUM Co, 6 June (RMP) and Bellingham, WHATCOM Co, 7 July (RW).

BRITISH COLUMBIA. Butterfly collecting in the Atlin region was poor (NK) as also along the Alaska Hwy (NK, CDF). Collecting in the Skenna River drainage was good (JHS). Moth collecting at Sproule Cr, 2400', Kootenay Dist was exceptionally good with several species not before recorded at that elevation above the lake (1800'). RR observed the common expected species in Kootenay Natl Park in mid Aug. NK took the usual Spring species near Cranbrook.

BUTTERFLIES: *T. lineola*, Cedarvale, eastern extension from Terrace, 17 July (JHS); *H. juba*, Cascade, SE RECORD, 6 June (JHS); *P. draco*, 8 mi E of Atlin, 2nd B.C. Record, 1 July (NK); *E. dorcus*, Cranberry Bog, S of Valemont, SE RECORD, 7 July (JHS) & Nadina Lake, 3103', SW RECORD, 13 July (JHS); *L. i. alaskensis*, Hudson Bay Mt, 5400', SW RECORD, 19 July (JHS); *P. eunomia*, Hudson Bay Mt, 5200'-5800', SW RECORD, 18-19 July (JHS); *C. selene*, Warm Bay, nr Atlin, abundant, 29-30 June (NK); *C. improba*, Sweeney Mt, 6000', SW RECORD, 12 July (JHS).

MOTHS: *S. quadriguttatus*, Cedarvale, NW RECORD, 16 JULY (JHS); *Oreta rosea*, Cedarvale, PROV RECORD, 19 July (JHS); *Aplocera plagiata*, Sproule Cr, 2400', 26 May, PROV RECORD, 14 Sept, 25 Sept (JHS).



ZONE 3 SOUTHWEST: ARIZONA, NEVADA, CALIFORNIA. Coordinator: R. L. Langston (RL). Contributors: G. T. & Ana N. Austin (GTA, ANA), J. P. Brock (JPB), R. Coyle (RC), L. Crabtree (LC), K. Davenport (KD), W. R. Dawes (WRD), J. A. De Benedictis (JAD), J. F. Emmel (JFE), C. D. Ferris (CDF), K. C. Hansen (KCH), R. H. Leuschner (RHL), J. T. McBurney (JTM), R. P. Meyer (RPM), A. Miller (AM), J. R. Mori (JRM), P. A. Opler (PAO), J. G. Pasko (JGP), G. Pratt (GP), R. Robertson (RR), P. J. Savage (PJS), A. M. Shapiro (AMS), O. Shields (OS), M. J. Smith (MJS), W. P. Sochor (WPS), S. Stone (SS), W. L. Swisher (WLS), J. P. Tuttle (JPT) and R. E. Wells (REW). Migratory species were reported from all three states. In the main butterflies sections, the species are in the sequence of Miller & Brown, 1981, although some of the genera and resurrected synonyms may differ. Cpgd=campground; Cr=Creek; Cyn=Canyon; L.A.=Los Angeles; Mds=Meadows; Mon=Monument; N.P.=National Park; n sp=new species; Natl=National; nr=near; Res=reservoir; Riv=Riverside; Rte=Route; SBM=San Bruno Mtns; S. Bdo=San Bernardino; S.L.O.=San Luis Obispo; sp=species; ssp=subspecies; USEW=US Fish and Wildlife Service.

ARIZONA. Contributors: JPB, CDF, KCH, RHL, PAO, JGP, PJS, MJS, SS, WLS, JPT and REW. Four COUNTY records for butterfly species. Several rare and unusual moth species, including NEW HOST records. Two COUNTY records for moths, which include one STATE record, with NORTH and WEST range extensions. CDF reported the weather mixed in Cochise Co, with the onset of the monsoon rains in late July.

MIGRATORY SPECIES: *Nymphalis californica* larvae on *Ceanothus fendleri*, Garden Cyn, Huachuca Mtns, COCHISE Co, 28 April (JPB, MJS, REW); adults at same location, 20 June (JPB). No migratory tendencies were noted for the California Tortoise Shell. No migrations per se reported for Arizona.

BUTTERFLIES: A single ♂ *Chioides catillus albofasciatus*, Madera Cyn, Santa Cruz Co, 17 Oct (JGP). *Oarisma edwardsii*, Mt. Graham at 9000', GRAHAM Co, 23-24 July (CDF). *Paratrytone melane vitellina*, Garden Cyn, Cochise Co, 28 April (JPB, MJS, REW) -- rare in Huachuca Mtns. *Amblyscirtes cassus*, Mt. Graham, 7900' & 9600', GRAHAM Co, 23-24 July (CDF). *A. fimbriata*, above Onion Saddle & West Turkey Cr, Chiricahua Mtns, 27 July (CDF) -- Cochise is still the only county in Arizona for this Mexican species. *Agathymus* sp nr *polingi*, 1 mi N of Sunflower, Maricopa Co, 25 Oct (PJS, MJS), typical *polingi* known only in Pima & Santa Cruz Counties - Bailowitz checklist. *Papilio bairdii*, Crazy Jug Point, 7449', Coconino Co, 30 July (WLS). *Neophasia menapia*, 1-2 mi E of Timp Point, 7800', Coconino Co, 29 July (WLS) -- John Garth in "Butterflies of Grand Canyon Natl Park" listed only one at the time of his survey. *Hypaurotis crysalus* & *Habrodais grunus*, Mt. Graham at 8700', HIGH ELEV., Graham Co, 23-24 July (CDF). *Apodemia palmerii*, Hwy 666, 4 mi S of Rose Peak, 7500', HIGH, Greenlee Co, 3 July (MJS) and Mt. Graham, 6500'+, 23-24 July (CDF). *Speyeria atlantis schellbachi*, Rd 425, 2 mi E of Rd 269, Kaibab Natl Forest, 7600', Coconino Co, 30 July (WLS). *S. atlantis nausicaa*, *Poladryas arachne*, *Thessalia fulvia* & *Anthanassa texana* among the 37 species recorded in the Mt. Graham area, 6500'-9000', 23-24 July (CDF). *Basilarchia weidemeyerii angustifascia* common at Snow Flat, 8800', Mt. Graham, 23-24 July (CDF). A sight record of *Mestra amymone*, Cave Spring Cpgd, Oak Creek Cyn, COCONINO Co, 19 July (J. F. Doyle via PAO). *Gyllopsis henschawi*, West Turkey Creek area, Cochise Co, 27 July (CDF). Fall brood of *C. pertepida dorothea*, Hualapai Mtns, Mohave Co, 20 Sept (JPB, MJS).

MOTHS: SPHINGIDAE - *Paonias excaecatus*, Hwy 666 at Rose Peak Lookout Rd, 3 July (MJS). SATURNIIDAE - *Coloradia pandora davisi* ova on *Pinus ponderosa*, adults at light, Flagstaff, Coconino Co, 30 Aug (JPT). *C. luski* adults,

Flagstaff, 30 June-2 July (JPT, Peg Tuttle). *Sphingicampa albolineata*, IV instar larva on *Acacia angustissima*, Miller Cyn, Huachuca Mtns, Cochise Co, 28 Aug (JPT) -- first recorded natural foodplant. *Citheronia splendens sinaloensis*, III instar larvae on *Gossypium thurberi*, nr Box Cyn, Pima Co, 28 Aug (JPT). *Hemileuca electra clio*, Hwy 68, 11 mi E of Davis Dam, Black Mtns, Mohave Co, 29 Sept (MJS); also Hwy 87, 4 mi S of Sunflower, Maricopa Co, 25 Oct (PJS, MJS). *H. nevadensis*, Jacks Canyon Cr, 4.5 mi SSE of Winslow, larvae on *Salix amygdaloides*, 23 May (PJS, MJS, SS). *H. diana*, larvae on *Quercus turbinella*, Schnebly Hill Rd, E of Sedona, 16, 23 May (MJS, et al); larvae on ground nr *Q. turbinella* & *Q. gambelli*, North Kaibab Trail (North Rim), Coconino Co, NORTH, 30 May (PJS, MJS); adults, Hualapai Mtn Rd, at park and nr milepost 8, MOHAVE Co, WEST, 17-29 Sept (JFB, PJS, MJS); adults abundant Hwy 87, 7 mi N of Sunflower, Maricopa/Gila Co line, 25 Oct (PJS, MJS). *H. magnifica* larvae common on *Artemisia fillifolia*, Hwy 180, 23-30 mi SE of Holbrook, APACHE Co, STATE record & WEST, 2 July (PJS, MJS) -- confirms old records, but first recorded for Arizona as *H. hera*, previously reported in Packard under *H. nevadensis*. LITHOSIINAE - *Cisthene juanita*, Madera Cyn, Santa Cruz Co, 8-9 Aug (RHL). ARCTIINAE - *Haploa reversa*, *Arachnis nedyma*, *Halisidota ingens*, *H. maculata* & *Grammia figurata*, Hwy 666 at Rose Peak Lookout Rd, Greenlee Co, 3 July (MJS). *Grammia allectans* & *Carales arizonensis*, 1 mi N of Onion Saddle, Cochise Co, 4 July (KCH, PJS, MJS). *Apantesis williamsii*, US 89, 1 mi N of Sunset Crater Rd & 10 mi S of Flagstaff, both Coconino Co, 27 June (MJS). *Lophocampa significans*, Jct Hwys 260 & 373 nr Greer, Apache Co, 2 July (JFB, PJS, MJS). CTENUCHINAE - *Ctenucha venosa* swarming along Hwy 366 from 6500'-9000', Mt. Graham, 23-24 July (CDF). NOCTUIDAE - *Acrionicta beameri* & *A. thoracica*, Ash Cyn, Huachuca Mtns, Cochise Co, 15 Aug (RHL). NOTODONTIDAE - *Datana perspicua mesillae*, *D. integerrima* ssp & *D. chiriquensis*, Ash Cyn, 15 Aug (RHL). LASIOCAMPIDAE - *Caecilia entima*, 1 mi N of Onion Saddle, Cochise Co, 4 July (KCH, PJS, MJS). GEOMETRIDAE - *Semiothisa piccoloi*, Ash Cyn, 15 Aug (RHL). *Hydriomena* sp and *Sabulodes* the commonest genera on High Peak Rd, 9600', Mt. Graham, 23-24 July (CDF), but the material has not yet been identified.

NEVADA: Contributors: GTA, ANA, JFB, WRD, JRM, JGP, RR, OS, MJS, WLS, JPT and REW. Twenty-three new COUNTY records for butterfly species (plus one subspecies), which include three new species for the STATE. Two COUNTY records for moths, which include one for the STATE. GTA & ANA report that the winter of 1986-87 was the second in succession with below normal precipitation. Snow pack was 40-50% below normal in most of the state. Most of the desert butterflies were below usual abundance. There was considerable rain in May in isolated parts of northern Nevada. In early June, there was again some rain over most of the state, and parts of eastern Nevada had heavy rain in late July. Collecting was spotty, but in areas which had rainfall and in river valleys, it was far above average (GTA, ANA).

MIGRATORY SPECIES: *Phoebis sennae marcellina*, only one record for this migrant, 15 mi N of Searchlight, Clark Co, 8 Aug (GTA, ANA). *Nymphalis californica*, Wheeler Pass Rd, Spring Mtns, Clark Co, 13 June, common (usually scarce here), but no migration observed (MJS); Large numbers of overwintered adults in NE Nevada (especially the Jarbidge Mtns) during late June; Also in numbers in western Nevada -- but less than in 1986 in the Carson Range (GTA, ANA). *Danaus plexippus*, usual numbers of breeding individuals, but no movements were detected (GTA, ANA).

BUTTERFLIES: *Staphylos ceos*, Boulder City, CLARK Co, WEST & STATE, 1 May (S. & R. McKown, det. GTA). *E. icelus*, Indian Cr, Santa Rosa Mtns, HUMBOLDT Co, 27 June (GTA, ANA). *H. ericetorum*, Limbo Range Rd, Selenite Range, PERSHING Co, 29 June (GTA, ANA). *P. eunus* nr *wrightii*, Hwy 95, 4.7 mi S of Schurz, MINERAL Co, 30 July (GTA, ANA). *B. philenor*, Lorenzi Park, Las Vegas, 9 July -- rare stray to Nevada (GTA, ANA). *P. indra*, Tahoe Meadows, WASHOE Co, 30 June (GTA, ANA). *P. rutulus arizonensis*, Las Vegas, 20 June, 14 July -- first Clark Co records outside of the Spring Mtns (GTA, ANA). *A. pima*, common, Jean, Clark Co, 20 March (WLS). *C. philodice eriphyle*, 8000', 10,000' & *C. alexandra edwardsi*, 10,000', Trail Cyn, Esmeralda Co, 1-2 Aug (WRD). *N. iole*, Indian Cr, Santa Rosa Mtns, HUMBOLDT Co, 27 June (GTA, ANA). *L. arota virginianensis*, Hwy 50 nr Pinto Summit, EUREKA Co, 31 July (GTA, ANA). *L. rubidus sirius*, Geysers Ranch, Lake Valley, LINCOLN Co, 31 July (GTA, ANA). *H. titus immaculosus*, Red Rock area (N of Reno), Washoe Co (furthest SOUTHWEST for this species anywhere), 27 July (GTA, ANA) & 3 Aug (C. Hageman) -- [Known from Hallelujah Jct, Lassen Co, CA, which is further WEST, but not as far south (RLL) -- also Modoc & Siskiyou Cos, CA (RLL, JRM)]. *S. behrii*, Sheldon Antelope Range, HUMBOLDT Co, 29 June (GTA, ANA) -- now known from all Nevada counties. *S. fuliginosum*, Limbo Range Rd, Selenite Range, PERSHING Co, 29 June (GTA, ANA). *S. californica cygnus*, Trail Cyn & Middle Cr Cyn, 8000'-9000', HIGH, Esmeralda Co, 1-2 Aug (WRD). *S. tetra*, American Ravine nr Silver City, LYON Co, 27 July (GTA, ANA). *C. affinis*, Upper Kingston Cyn, Lander Co, 1 July (JRM, OS, REW); White Pine Range, 3 July & Cave Peak, 10,000', 4 July, both White Pine Co (JRM, OS, REW); Bear Creek Summit, 8500', Jarbidge Mtns, ELKO Co, 7 July (OS). *M. siva chalcosiva*, N end White Pine Mtns, White Pine Co, 3 July (JRM, OS, REW). *B. exilis* noted nearly to the Northern Nevada border, but in very small numbers (GTA, ANA). *E. comyntas*, Kingsbury Grade, Carson Range, DOUGLAS Co & STATE, 5 May (GTA, ANA) -- genitalia checked, however recorded earlier without substantiation; a specimen, collected previously nearby, was found in the Nevada State Museum collection. *E. amyntula*, Hwy 140, 37.5 mi NW of Hwy 95, HUMBOLDT Co, 28 June (GTA, ANA) -- now known from all Nevada counties. *L. idas anna*, Trail Cyn, 9000', ESMERALDA Co, 1-2 Aug (WRD). *I. shasta minnehaha*, Sheldon Antelope Refuge, Bald Mtn Summit, WASHOE Co, 29 June (GTA, ANA) -- COUNTY record for subspecies, nominate *shasta* known from the Carson Range, Washoe Co. *C. nemesia californica*, Bowman's Res, Moapa Valley, Clark Co, 13 June, EARLY -- previous early, 30 July (GTA, ANA) and Logandale, Clark Co, 6 Sept (JGP). *S. cybele leto*, Red Rock area (N of Reno), Washoe Co, 27 July (GTA, ANA) -- new colony, NORTH for Nevada. One fresh ♂ *S. mormonia artonis*, upper end Lamoille Cyn, Ruby Mtns, ELKO Co, 7 July, EARLY (OS). *Phyciodes campestris*, Hwy 50 E of Fallon, CHURCHILL Co, 30 July (GTA, ANA). *Euphydryas colon wallacensis* & *E. editha* nr *edithana*, Sheldon Antelope Range, Rte 34A nr jct Rte 8A, both new for HUMBOLDT Co, 29 June (GTA, ANA). *E. editha* nr *koroti*, Trail Cyn, ESMERALDA Co, 1-2 Aug (WRD). *P. faunus rusticus*, Glenbrook, DOUGLAS Co and Incline Village, WASHOE Co, both 5 May (GTA, ANA) -- first reported for the STATE in the 1986 Season Summary from Carson City [Co]. *N. vau-album*, Jarbidge Cpgd, Jarbidge Cyn, ELKO Co & STATE, 25 June (GTA, ANA). *B. a. archippus* (nominate, NOT *lahontani*), 1 mi S of Contact, ELKO Co, 5 July (JRM, REW). *B. lorquini*, Limbo Range Rd, Selenite Range, PERSHING Co, 29 June (GTA, ANA). *C. pegala* (phenotype similar to colonies northward in White Pine & ELKO Cos), Geyser Ranch, Lake Valley, LINCOLN Co & SOUTH, 31 July (GTA, ANA). *C. pegala* (phenotype unlike any others in Nevada), Red Rock area (N of Reno), Washoe Co, 27 July (GTA), 3 Aug (C. Hageman). *O. c. chryxus*, Cave Peak, 10,000', Schell Creek Range, White Pine Co, 4 July (JRM, OS, REW). *D. gilippus strigosus*, Minden, Douglas Co, 1 Aug (JGP) -- previously published for most of Nevada (15 counties). Special Comments: *P. sabuleti* (earliest in north), *A. campestris* (LATE), *O. yuma* (new colony), *P. eurymedon* (EARLY), *P. protodice* (rare), *P. occidentalis* (huge numbers), *L. melissa* (EARLY), *Calephelis wrighti* (EARLY) and *S. nokomis apacheana* (new colony) -- GTA has details.

MOths: SATURNIIDAE - *Coloradia doris*, Hwy 722, 4 mi W of Carroll Summit, 7200', CHURCHILL Co, 1 July (JRM, REW) -- Pinyon Pines in this area, but no *Ponderosa*. *Hemileuca electra clio*: III to V instar larvae on *Eriogonum* species, Grapevine Cyn, Newberry Mtns, Clark Co, 27 March (MJS, JPT); Larvae on *Eriogonum fasciculatum poliofolium* at 2 other areas in Clark Co -- Hwy 161, 3 mi W of Jean, 5 Apr (JFB, MJS) and Red Springs Picnic Area W of Las Vegas, 12 Apr (MJS) [both are NORTHWEST records, previously known from the Newberry Mtns nr Laughlin]. *H. neumoegeni*, I instar larvae on *Prunus fasciculata*, Hwy 160, 5 mi W of Hwy 159, Clark Co, 27 March (MJS, JPT). *H. burnsi*, IV-V instar larvae extremely common on *Dalea fremonti*, 4 mi W of Davis Dam, Clark Co, 27 March (MJS, JPT). *H. egianterina annulata*, larvae on *Symphoricarpos* sp, Kyle Cyn Rd, Spring Mtns, Clark Co, 25 May, adults on wing by 23 July (MJS). ARCTIINAE - *Kodiosoma*

fulvum, Searchlight, Clark Co, 18 April (RR). K. otero larvae on Stephanomeria sp., Hwy 161, 3 mi W of Jean, Clark Co, 5 Apr (JPB, MJS). NOCTUIDAE - Schinia pulchripennis, Searchlight, CLARK Co & STATE, 18 Apr (RR) [different from N Calif. Sierra Foothill specimens]. LASIOCAMPIDAE - Gloveria arizonensis, 4 mi W of Carroll Summit, 7200', Churchill Co, 1 July and Birch Cr, Toiyabe Range, Lander Co, 2 July (JRM, REW).

CALIFORNIA. Contributors: RC, LC, KD, JAD, JFE, RLL, RHL, JTM, RPM, AM, JRM, PAO, JGP, GP, RR, EJS, AMS, OS, MJS, WPS, WLS and REW. Thirty new COUNTY records for butterfly species and two for subspecies. At least four undescribed species of moths, one COUNTY & STATE record, plus four additional COUNTY records for known taxa.

The winter of 1986-87 was very dry, generally light rains along the coast and interior valleys with little snow in the mountains (RLL, AMS). In Mariposa Co, rain & snow in early Jan, Feb and mid-March only 40% of normal (OS). Spring was moderately cloudy and cool, both coastally and in the mountains, with more late showers than usual, but too light and scattered to prevent severe drought later. From 4-14 May a heat wave gripped the northern part of the state. In Sacramento it was around 100° or above (5 May the earliest 100° ever, no previous May had more than two 100° days), and San Francisco was in the 80s with 93° on 5 May, 91° on 7 May (RLL, AMS). Dry conditions affected collecting in much of the Kern/Tulare County region (KD). Another heat spell along the coast in early June (RLL), but it remained cooler than normal in the mountains until 13-14 July (AMS). In Mt. Shasta City it hit 102° on 14 July for the hottest ever; then a midsummer "cold low" struck -- a high of only 48° at Mt. Shasta City on 17 July -- only 3 days later; 4 inches of snow at 5000' and 4 feet at 10,000' (AMS). Extreme drought in Mariposa Co, June-Oct, with net collecting poor, backlighting very poor (OS). The usual coastal fogs in July & Aug (RLL). By the end of Aug the Central Valley sweltered (110° in Davis, 30 Aug), thunderstorms raked the mountains of the north state, but by this time the vegetation was tinder dry; lightning strikes set thousands of fires and by mid-Sept some 4000 blazes had destroyed half a million acres (AMS); Not only the Sierra Nevada was on fire, but parts of Humboldt and Del Norte Counties were ablaze (RLL); This produced smoke and haze that lingered in the valleys and even out over the ocean into late Oct (RLL, AMS). Another heat wave in late Sept-early Oct produced 100° on 1 Oct, and 102° on 2 Oct in San Francisco; this the all-time highest for any month (RLL, AMS). By late Oct, autumn rains had started, with definitive snow in the mountains; At years end there was well above normal precipitation in most of the state, especially in the Southland (RLL).

MIGRATORY SPECIES: P. leo arizonensis, Garden Grove, Orange Co, 26 Aug, a single fairly fresh adult nectaring on Buddleia (WFS) -- 21 years since the 4 Sept 1966 capture at Disneyland by AMS; Hemet, Riverside Co, 7, 26 Sept, 1 worn adult each date, nectaring on Lantana (JFE). N. californica, Idyllwild, San Jacinto Mtns, Riverside Co, 5 Feb, EARLY, worn adult on mild winter day (JFE); A few resident hibernants at Jerseydale, Mariposa Co, early Feb-early March (OS); First observed 17 Feb in San Bruno Mtns, San Mateo Co, moderate temp (50°+ some days) March-8 April, generally flying SE (RLL); Only 3 flying S thru the Marina Dunes, Monterey Co, 27 March -- no larval hosts here (RLL); Santa Cruz, wharf area, 27 March (25 in 10 min/100') flying NE into offshore wind (RLL); Abundant, Santa Cruz Mtns, Glenwood Rd, 28 March (RLL); Flying thru Albany, Emeryville, Berkeley, etc., 28-29 March (RLL); At Jerseydale, large SE migration late March to mid-April (max = 30-40/min/100' on 29 March) with Ceanothus cuneatus occasionally stripped by numerous larvae nr Darrah, Mariposa Co, early May (OS); Huge numbers in the mountain areas of Kern & Tulare Counties, May-early June (KD); Present for only a few days in early June, Oakmont, 7 mi SSE of Santa Rosa, Sonoma Co (WLS); Jerseydale, very large W-WW migration of first brood mid-May to mid-June (max = 200 min/25' across gully, 28 May) (OS); Large flights at Midpines, Nippenawasee, Oakhurst, Cathays Valley & El Portal emanating from Fresno Dome area, Madera Co (OS); Common in the Temblor Range, Kern & S.L.O. Counties, 4 June (KD) -- few records from S.L.O. Co; Millions passed Davis, Yolo Co, 2-5 June flying NE (AMS); In the San Bruno Mtns fresh adults by 3 June, disappearing by 18 June (RLL); Residents at Jerseydale late Sept-late Oct, with small SE-NE migration mid-Oct (OS); A surprisingly large return flight out of the Sierra Nevada and across the Central Valley in mid-Oct (AMS); However, not observed in the San Bruno Mtns after 17 June, or in the Bay area in autumn (RLL). N. milberti furcillata, seen unusually often at low altitudes Jan-Feb, including West Sacramento, Yolo Co (AMS). V. cardui, an extremely poor year for the Painted Lady (AMS); San Bruno Mtns, singles on 1 May, 22 June, 20 July, 31 Aug and only 5 from 4-28 Sept (RLL); Jerseydale, Mariposa Co, early Sept to mid-Oct, occasional at flowers (OS). D. plexippus, worn, Marina Dunes, Monterey Co, 27 March, 24 April -- probably flew from the Pacific Grove aggregation (RLL); At Jerseydale, Mariposa Co, began migrating in mid-July and 333 adults banded mid-Aug to mid-Oct and last seen 18 Oct with 16% recaptured at Jerseydale after 1 or more days, the longest time to recapture being 16 days and the peak flight from Jerseydale in late Sept to early Oct, with majority migrating W-SW (OS); Notably poor in 1987 throughout the north state (AMS); A few worn adults in Bay Area "flying back", late March-April and the first fall migrant was observed very LATE at Antioch. Contra Costa Co, 7 Sept but less than 2 dozen noted in the Bay Area during Sept-18 Oct (RLL).

BUTTERFLIES: A single E. clarus, North Sacramento, 17 May (AMS) -- very rare in the Central Valley. T. pylades, Signal Peak Lookout, 7100', HIGH, Mariposa Co, 17 June (OS). T. mexicana nevada, South entrance, Lassen Volcanic N.P., TEHAMA Co, 12 June (LC). E. brizo lacustris, Kern River Cyn just N of Roads End, 2 Apr (KD) -- 2nd Tulare Co record; Eureka Peak, 5500', Joshua Tree Natl Mon, Riverside/S. Bdn. Co line, 14 April; W slope Lamont Peak, 5100', Tulare Co, 30 April, 3rd Tulare Co record (both JFE, GP). E. persius, Kings Cr, Lassen N.P., Shasta Co, 5 June (LC) and 1-2 mi S of Tiger Flat, Kern Co, 20 June (KD) -- 2nd Kern Co record, new for Greenhorn Mtns. P. ruralis, S above Sonora Pass, 10,500', HIGH, Mono Co, 7 July (KD). P. scriptura, 2 mi N of Tipton, Tulare Co, 22 Aug (KD), and 1 mi S of Brawley, Imperial Co, 10 Oct, LATE (JGP). P. communis/albescens, 1 mi N of Chowchilla, MADERA Co, 23 June (KD). H. ericetorum, 3 mi S of Raymond, MADERA Co, 21 June (PAO) and Upper Cottonwood Cyn, State Wildlife area, W of Los Banos, MERCED Co, 23 June (PAO). P. libya, Hwy 58, Temblor Range at 2500'-3000', Kern/S.L.O. Cos, 4 June (KD). C. aurantiaca, common, Porterville residential area & along Tule R, 5 Sept (KD) -- unusual in San Joaquin Valley! H. columbia, fresh, Footman Ridge summit, 4600', E of Jerseydale, Mariposa Co, 28 Sept, LATE (OS). Polites sonora, Granite Cr, 33 mi E of Bass L, Madera Co, 22 June (PAO) -- confirms earlier Madera Co record by R. E. Stanford. A. campestris, Daulton, MADERA Co, 21 June (PAO) and 1 mi N of Chowchilla, Madera Co, 23 June (KD) -- 2nd Madera Co record. O. agricola, Upper Cottonwood Cyn, State Wildlife area, W of Los Banos, MERCED Co, 23 June (PAO). O. yuma (varies from nominate), 1 mi N of Chowchilla (about 1 mi S of Chowchilla River), MADERA Co, 23 June (KD); 3 mi N of Corcoran off Hwy 43, KINGS Co, 22 Aug (KD); 2 mi N of Tipton off Hwy 99, TULARE Co, 22 Aug (KD), 28 Aug (RPM), very common in dry fields up to 200 yd from Phragmites; Common in bottomlands, Porterville, SOUTH for San Joaquin Valley, 5 Sept (KD). P. melane, Rancho Cordova, Sacramento Co, 7 Nov, LATE (AMS) and very worn by 5 Dec, Kensington, Contra Costa Co (RLL). Numerous B. philenor hirsuta, jct Mokelumne & San Joaquin Rivers, Sacramento/San Joaquin Co line, 21 Apr (RC). P. polyxenes coloro, Hemet, Riverside Co, 23 Sept, 10 & 10 on Lantana (JFE). P. zelicaon, Davis, Yolo Co, 14 Nov, LATE (AMS). P. indra, Mt. Hoffman, Lassen N.P., LASSEN Co, 25 June (LC). P. cresphontes nr Citrus grove in Banning, Riverside Co, 8 in 3 hours, 21 Aug, 10 in 4 hr, 22 Aug (AM), and on Lantana nr large Citrus groves in extreme SE part of Hemet, singleton adults on 24, 29 Aug, 7, 16, 19 Sept & 27 Oct (JFE), the 2nd year in Hemet, 1st was 1984. N. menapia began 16 June, Jerseydale, Mariposa Co, dropping off after 24 June (OS) and vicinity of Shaver Lake, Fresno Co, 28-29 Aug, LATE (OS). N. menapia mellanica assoc/w Douglas Fir, Oakmont, 7 mi SE of Santa Rosa, Sonoma Co, 4-19 June (WLS) -- EAST & INLAND record -- cited in previous Season Summaries as N. m. tau also with the Douglas Fir host (RLL). P. protodice, Daulton, MADERA Co,

21 June (PAO) and a single ♂, Suisun City, Solano Co, 5 May (AMS) -- not seen here for a decade! Fair numbers in Antioch just E of Fulton Shipyard, 7 Sept (RLL); 1 mi N of Chowchilla, Madera Co, 23 June (KD) -- 2nd Madera Co record. *P. occidentalis* "calyce", Boreal Ridge, Nevada Co, 13 April, EARLY for 7000' (AMS). *Falcapica lanceolata* in large numbers, Lumsden Bridge, Tuolumne R, Tuolumne Co, 23 Apr (RC, JRM) and first time EAST SLOPE, nr Sierraville, Sierra Co, 7 May (AMS). *F. 1. australis*, Eureka Peak, 5500', Riv./S. Bdn. Co line, 14 Apr (JFE, GP). *Z. eurydice*, Hemet, 27 Oct, LATE (JFE). *T. arota*, 2 mi S of Oakhurst, MADERA Co, 22 June (PAO) and Upper Cottonwood Cyn W of Los Banos, MERCED Co, 23 June (PAO). *L. xanthoides*, same data, MERCED Co (PAO). *L. phlaes hypophlaeas*, N slope Leavitt Peak, 11,000', Mono Co, 7 July, EARLY (KD); Cirque 1 mi E of White Mtn Peak, 12,800', Mono Co, 25 July, assoc/w *Oxyria digyna* (JFE, GP); and Saddlebag Lake, 10,100', Mono Co, 31 July (JGP). *L. nivalis*, Ethelfreda Cr, 28 mi E of Bass L, Madera Co, 22 June (PAO) -- confirms 1985 record by R. V. Kelson for Madera Co; Kings Creek, Lassen N.P., SHASTA Co, 11 July 86 (LC). *H. grunus*, Mix Cyn, SOLANO Co, 31 May (AMS) -- 1st record in the Vaca Hills, but long expected as Goldencup Oak in upper end of cyn. and to the north. Huge numbers of *S. a. auretorum*, Hwy 58, Temblor Range, KERN Co/SAN LUIS OBISPO Co, 13 May, common, worn 4 June (KD) -- Previous records for Kern Co are of *spadix*; PAO took *auretorum* in the Temblors in 1957, but were called *spadix* at that time. *C. viridis*, Milagra Ridge, Skyline College & Sweeney Ridge, San Mateo Co, 19, 20, 24, 25 March, 9, 15 April (RLL). *C. "viridis phenotype"* common, Del Puerto Cyn, Stanislaus Co, 27 March (RLL). *M. spinetorum*, Ethelfreda Cr, 28 mi E of Bass L, MADERA Co, 22 June (PAO). *M. johnsoni*, Kings Cr, Lassen N.P., SHASTA Co, 5 June (LC). *M. nelsoni muiri* & *M. siya mansfieldi* synchronous, Cottonwood Pass, Hwy, 41, KERN Co/San Luis Obispo Co, 10 April (RC, JRM, REW) & 20 April (KD) -- new for subsp *muiri* in KERN Co [*muiri* apparently using Calif. Junipers here -- no Cedars.] Also *muiri*, Griswold Cr, 12 mi S of New Idria, S.L.O. Co, 10 April (RC, JRM, REW). *M. siya mansfieldi*, 1000 yd W of Black Mtn, 3500', FRESNO Co, 26 April (WLS); Extremely abundant (500+), Hwy 58, Temblor Range, Kern/S.L.O. Cos, 13 May, common 4 June (KD) -- longer flight period than published. Brown M. loki, S of Scissors Crossing, San Diego Co, 9 May (RHL). *I. eryphon*, Reds Mtns, Devil's Postpile, 7600', MADERA Co, 21 June (PAO). *S. melinus pudica* (small, very dark), Marina Dunes, Monterey Co, 19 Feb, EARLY (RLL). *B. exilis*, West Berkeley, shoreline (within circle, Xerces Count Day, 20 June), also 31 Oct, 23 Nov, LATE (RLL). *E. comyntas*, 1 mi N of Chowchilla, MADERA Co, 23 June (KD) and common along Tule R, Porterville, 5 Sept (KD). *C. ladon echo*, Gates Cyn, Solano Co, 14 Jan, EARLY (AMS). *C. ladon cinerea*, Mahogany Flats, Panamint Mtns, Inyo Co, 13 June (JTM). *E. battoides bernardino*, S of Scissors Crossing, San Diego Co, 9 May (RHL) -- nr E limits of *bernardino* here, *martini* further east (RLL). *E. enoptes* ssp (not *smithi* according to the USFW), I-280 at Bunker Hill Rd & Crystal Springs Rest Area, San Mateo Co, 2 June (RLL) -- previous San Mateo Co & Santa Cruz Co *enoptes* records by J. Lane & MJS. *P. sonorensis* assoc/w *Dudleya calicicola* at 3 localities; S slope Laura Peak, 3600-4600', Kern Co, 28-29 March, 14 April (KD); just N of Roads End at Dam, Tulare Co, 2, 14 April (KD), and Sherman Pass Rd 3.5 mi E of Kern River Cyn, Tulare Co, 2, 14 April (KD); also assoc/w *Dudleya cymosa*, 2 mi W of Lumsden Bridge, Tuolumne R, Tuolumne Co, 23 April (RC, JRM). *G. lygdamus* nr *oro*, Mahogany Flats, Panamint Mtns, Inyo Co, 13 June, LATE (JTM). *I. icarioides* nr *pardalis*, Cottonwood Pass, KERN Co, 20 April (KD) -- NEW COUNTY if true *pardalis*, NOT new if closer to *evius* (RLL). *I. lupini*, Manzanita Cr, Lassen N.P., Shasta Co, 20 June 86 (LC) and Granite Creek, 33 mi E of Bass L, MADERA Co, 22 June (PAO). *I. neurona*, common, vicinity of Mil Potrero Hwy at Apache Potrero turnoff, Ventura Co, 11 June (KD). *A. franklinii podarce*, Horseshoe Lake, Lassen N.P., Shasta Co, 3 July (LC). *Calephelis wrighti*, S of Scissors Crossing, San Diego Co, 9 May (RHL). Large specimens of *A. mormo*, Mountain Pass on I-15, S. Bdn. Co, 5 Sept (JGP). *A. vanillae incarnata*, Davis, Yolo Co, 16 Aug (AMS); Larvae on *Pasiflora incarnata* in Fairfield, 15 Nov (AMS) -- known in Solano Co for at least 27 yr -- strong breeding populations in Benecia, Sept-Nov 1960 (RLL); A single ♀, Kensington, Contra Costa Co, 27 Nov 87, LATE (RLL). A worn ♀ *S. zerene*, Footman Ridge Summit, 4600', Mariposa Co, 30 Sept, LATE (OS). *S. callippe comstocki*, 10 mi W of McKittrick off Hwy 58 (0.5 mi E Temblor Cr), Temblor Range, KERN Co, 16 May (RPM), 4 June (KD). Fresh *B. e. epithore*, both sexes, Grizzly Flat Trail N of Saratoga Gap, Santa Clara Co, 25 April, very EARLY (RLL). *B. epithore sierra*, Reds Mtns, Devil's Postpile, 7600', MADERA Co, 21 June (PAO). *Melittaea palla vallismortis*, Mahogany Flats, Panamint Mtns, Inyo Co, 13 June (JTM). *M. hoffmanii*, one ♂, Carson Pass, 8600', ALPINE Co, 29 June (Bill Miller via REW). *A. texana*, Bonanza King Cyn, Providence Mtns, S. Bdn. Co, 9 May (JGP). Adult *E. chalcedona kingstonensis* plus larvae on *Keekiella antirrhinoides*, Piute Range E of Lanfair Valley, S. Bdn. Co, 18 March (JFE, GP). *P. faunus rusticus*, Kings Cr, Lassen N.P., 5 June (LC) -- larval record for Shasta Co in 1983 SS; and Stony Creek Camp, Tulare Co, 26 June (KD) -- 2nd Tulare Co record, 1st at Quaking Aspen in 1955. *P. zephyrus* & *N. antiopa*, Reds Mtns, Devil's Postpile, 7600', both new for MADERA Co, 21 June (PAO). *N. antiopa*, Willow Springs, Last Chance Range, Inyo Co, 10 Jun (RC, JRM), unusual in desert ranges. *Coeonympha californica*, Tar Cyn, KINGS Co, 10 Apr (RC, JRM, REW), plus Upper Cottonwood Cyn, State Wildlife Area, W of Los Banos, Merced Co, 23 June (PAO) -- confirms 1964 Merced Co record by RLL, S of Mariposa Peak.

MOTHS: SPHINGIDAE - *Proserpinus phaeton*, Anza, 4000', Riverside Co, 17-19 April (RHL). SATURNIIDAE - *Hyalophora euryalis*, a pair in copula, 1315 PST, on *Rhamnus californica*, San Bruno Mtns, San Mateo Co, 17 Feb, EARLY (RLL) and larvae on *Ceanothus* sp., 1 mi N of Coxey Mtns, San Bernardino Mtns, S. Bdn. Co, 7 June (PJS, MJS) -- unusual for desert slopes. I instar larvae of *Hemileuca nuttalli* on *Holodiscus microphyllus*, NEW HOST, Monitor Pass, Mono Co (REW). LITHOSIINAE - *Cisthene deserta*, Lake Cachuma, Santa Barbara Co, 3 Oct (RHL). ARCTIIDAE - Many black oo of *Leptarctia californiaria* among the normal yellow, San Bruno Mtns, late March-April (RLL). NOCTUIDAE - *Euxoa basalis*, La Grange, STANISLAUS Co & STATE, 4 Sept (R. P. Allen via RR) -- LaFontaine in MONA does not list *basalis* for California. *Coplabepharon sanctae-monicae*, El Segundo Dunes, Los Angeles Co, 9 Sept, 1 Oct (RHL). *Adelphagrotis indeterminata*, Lake Cachuma, Santa Barbara Co, 3 Oct (RHL). *Abagrotis tecatensis*, Pinyon Crest, 4200', Riverside Co, 16-18 Oct (RHL). *Xylomyges*? (a new species?) and reduced numbers of 4 species of *Annaphila*, Democrat & Miracle Hot Springs, Kern Co, 28-29 March (RHL). *Pseudaletia unipuncta*, San Bruno Mtns, 2 Jan, EARLY (RLL), 4 May (JAD). *Leucania oaxacana* (an Arizona-Mexican species), El Cajon, San Diego Co, 7 Feb (RHL). *Feralia februalis* reared from *Heteromeles arbutifolia*, NEW HOST and first time reared on San Bruno Mtn (JAD); adults at light to 29 Jan (RLL). *Pleroma* n sp nr *conserta*, Silverwood Sanctuary, Lakeside, SAN DIEGO Co, 6 Feb (RHL). *Hypocoenia* n sp, 3 mi E of Walker, MONO Co, 29 June (RR) -- this *Hypocoenia* known, but undescribed for over 20 years -- Ferguson will describe it in his revision of the genus. *Heliothodes diminutiva*, Marina Dunes, Monterey Co, 24 Apr, 23 June (RLL). *Schinia triolata*, Anza, 4000', Riverside Co, 17-19 April (RHL). One *Tarachidia fumata* by day, Mint Cyn, Los Angeles Co, 11 April (RHL). *Acontia* nr *flavipennis* (day-flier, probably new) & *Autographa albavitta*, Laguna Mtns, 6000', San Diego Co, 2-3 May (RHL). LYMANTRIIDAE - *Orgyia magna*, El Cajon, San Diego Co, 7 Feb (RHL). GEOMETRIDAE - *Hydriomena albifasciata*, Brisbane, San Mateo Co, 9 Feb (RLL). *H. nubilofasciata* at light, 10 March, San Bruno Mtns (RLL) and 3 adults reared from *Quercus agrifolia*, a new rearing record for SBM (JAD). *H. edenata olivata*, Laguna Mtns, 6000', 2-3 May (RHL). *Epirrhoe plebeculata*, San Bruno Mtns, 7 Jan, EARLY, 19-26 Jan (RLL). *Stenoporpia pulchella coolidgearia*, El Cajon, 7 Feb (RHL). PYRALIDAE - *Edia minutissima*, El Cajon, 7 Feb (RHL). *Udea itysalis marinensis* reared on *Cynoglossum grande*, San Bruno Mtns, SAN MATEO Co & SOUTH (JAD) -- new to SBM survey and new to COUNTY; Previously known from Marin and other North Bay counties (JAD). *Sarata perfusalis*, San Bruno Mtns, 26 March (RLL). PTEROPHORIDAE - *Amblyptilia pica cataea* reared from *Scroph. californica* & *Stachys* sp, new to SBM survey (JAD). TORTRICIDAE - *Phaneta amphorana*, 19 Feb & numerous adult *Grapholita imitativa* assoc/w *Lupinus chamissonis*, 19 Feb, 27 March, Marina Dunes, Monterey Co (RLL). *Cydia cupressana* & *Henricus macrocarpanus* reared from cones of *Cupressus macrocarpus*, both new to SBM survey (JAD). *Decodes operi* & *D. asapeus*.

Silverwood Sanctuary, Lakeside, San Diego Co, 6 Feb (RHL); 14 adult *D. asapeus* reared from *Grossularia californica*, San Bruno Mtns, SAN MATEO Co (JAD). GELECHIIDAE - *Aristotelia argentifera* & *Anacamptis lacteuschrella*, El Segundo Dunes, L.A. Co, 9 Sept, 1 Oct (RHL); *A. lacteuschrella* reared from *Croton californicus*, Colma Landfill area, San Mateo Co -- new to SBM survey, but may exist in other sandy areas (JAD). *Symmetrischema striatella* reared on *Solanum nodiflorum*, NEW HOST record in San Bruno Mtns (JAD) -- reared before on another introduced *Solanum*. COSMOPTERIGIDAE - *Anoncia orites* reared from *Monardella villosa*, San Bruno Mtns (JAD). ETHMIIDAE - *Ethmia scylla*, Democrat & Miracle Hot Springs, Kern Co, 28-29 March (RHL). SESIIDAE - *Ramosia polygona* assoc/w *Eriogonum l. latifolium*, Marina Dunes, 10-11 June, 7 July & assoc/w *E. parvifolium*, Sand City, 12, 24 June, 22, 31 July, both Monterey Co (RL). HELIODINIDAE - *Lithariapteryx abroniaecella*, Marina Dunes, 22, 30 July (RL) and El Segundo Dunes, L.A. Co, 9 Sept, 1 Oct (RHL). [The smaller the insect, the longer the name! But, see the next!]. SCHRECKENSTEINIIDAE - *Schreckensteinia felicella* reared from *Castilleja wrightii*, San Bruno Mtns (JAD). ADELIDAE - *Adela septentrionella*, Grizzly Flat Trail, N of Saratoga Gap, Santa Clara Co, 25 April (RL).



ZONE 4 ROCKY MOUNTAINS: ALBERTA, MONTANA, WYOMING, UTAH, COLORADO and NEW MEXICO. Coordinator: Ray E. Stanford (RES). Contributors: the Karolis Bagdonas "flying circus" (BFC, including Peg Abbott, Nancy Allen, Karolis Bagdonas, William Bagdonas, Lynell Marie Bagdonas, Davin Bagdonas, Helena Bagdonas, Pat Bryan, Wayne Bushonville, Pamela Chapman, Lynn Hodgson, Karin Long, Kellie Perkins, Mary Kate Schroeder, Mike Smith, Lisa Snyder, Alex Vargo), Steven J. Cary (SJC), Terhune S. Dickel (TSD), Scott L. Ellis (SLE), Clifford D. Ferris (CDF), Gary B. Gier (GBG), Jack L. Harry (JLH), Richard L. Hardesty (RLH), Samuel A. Johnson (SAJ), Lewis C. Keenan (LCK), Richard L. Klopshinske (RLK), Steven J. Kohler (SKJ), Norbert G. Kondla (NGK), Ronald H. Leuschner (RHL), Robert C. Mower (RCM), Craig Odegard (CO), Jack L. Odor (JLO), Paul A. Opler (PAO), Richard C. Rosche (RCR), Ronald A. Royer (RAR), Patrick J. Savage (PJS), James A. Scott (JAS), Michael J. Smith (MJS), Stephen W. Sommerfeld (SWS), Ernest H. Williams (EHW). Total 25, the lowest ever. Data received included 815 total records, of which 572 were for butterflies and 243 for moths; there were 4 state records and 266 county records for butterflies. Only 3 species were completed from all counties of a particular state. The 1987 season was basically good, with many early and late records, and several records for southern migrant species. The year for all records is 1987 except as indicated to the contrary. Capitalized county names represent new county records for my files. Abbreviations are obvious with the following exceptions: Cn = canyon; Cg = campground; Mdw = meadow; Rvr = River; SWA = State Wildlife Area. Thanks as always to all contributors.

ALBERTA. Contributors: NGK, RAR.

BUTTERFLIES: An early butterfly season (NGK). *Euchloe olympia*, Lethbridge, 2 May, EARLY (NGK). *Anthocharis sara*, S Castle Rvr near Windsor Mtn, 7 May, EARLY (NGK). *Colias nastes* & *C. pelidne*, 9000', Kananaskis Country, 12 Aug (RAR). *Pontia sisymbrii*, S Castle Rvr nr Windsor Mtn, 7 May, EARLY (NGK). *Lycaena helloides*, Chin Coulee at Hwy 36, 17 May, EARLY (NGK). *Callophrys sheridanii* and *Incisalia mossii*, S Castle Rvr nr Windsor Mtn, 7 May, EARLY (NGK). *Euphilotes enoptes*, Oldman Rvr nr Taber, 17 May, EARLY (NGK). *Plebejus rusticus*, 9000', Kananaskis Country, 12 Aug (RAR). *P. icarioides*, few miles SW of Warner, 17 May, EARLY (NGK). *Chlosyne palla* and *Phyciodes pratensis*, Frank, 6 June, EARLY (NGK). *Nymphalis californica*, several records including Plateau Mtn, 12 Jun, unusually common in AB in 1987 (NGK).

MOTHS: No records received.

MONTANA. Contributors: RLH, SKJ, NGK, CO, PAO, RAR. The season was advanced early, but returned to normal with much rain in June and July, again becoming dry in August.

BUTTERFLIES: About 150 data points were received, representing 76 species and 125 new county records. There was one state record (*Euchloe creusa*). Two more species were completed from all MT counties (*Plebejus melissa*, *Phyciodes tharos* COMPLEX), raising the total known from all counties to 7 species. That puts MT ahead of CO, which is a mite embarrassing for us locals! The MT avg number of species/county is now 72.59. *Epargyreus clarus*, Musselshell Rvr Bluffs, GARFIELD Co, 10 Jun; Bull Mts, MUSSELSHELL Co, 11 Jun; S of Teigen, PETROLEUM Co, 14 May and 10 Jun (all SKJ). *Thorybes pylades*, near Grassrange, FERGUS Co, 10 Jun and Musselshell Rvr Bluffs, GARFIELD Co, 10 Jun; plus Bull Mts, MUSSELSHELL Co, 11 Jun; and S of Teigen, PETROLEUM Co, 14 May and 10 Jun (all SKJ). *Erynnis icelus*, Simmons Mdw, Swan State Forest, LAKE Co, 5 Jun (SKJ). *E. afranius*, N of Mosby, GARFIELD Co, 14 May; S of Teigen, PETROLEUM Co, 14 May (both SKJ). *Pyrgus ruralis*, 1/2 mile W of Haskill Pass, 4000', Flathead Co, LOW, 26 Apr (RLH). *Pholisora catullus*, 4 miles N of Geyser, JUDITH BASIN Co, 30 Jul; 3 miles SW of Hysham, TREASURE Co, 19 Aug (both SKJ). *Oarisma garita*, Bull Mts, MUSSELSHELL Co, 11 Jun (SKJ). *Polites peckius*, N of Belt, CASCADE Co, 30 Jul; Highwood Mts, CHOUTEAU Co, 30 Jul; 4 mi N of Geyser, JUDITH BASIN Co, 30 Jul (all SKJ). *Ochlodes sylvanoides*, Musselshell Rvr Bluffs, N of Mosby, GARFIELD Co, 18 Aug; 4 mi N of Geyser, JUDITH BASIN Co, 30 Jul; Big Sheep Mts, PRAIRIE Co, 18 Aug (all SKJ). *Hesperia comma*, Big Sheep Mts, PRAIRIE Co, 18 Aug (SKJ). *H. pahaska*, Musselshell Rvr Bluffs, GARFIELD Co, NE, 10 Jun; 11 miles NW of Babb, GLACIER Co, NW, 4 Jun; S of Teigen, PETROLEUM Co, 10 Jun (all SKJ). *H. nevada*, N of Mosby, GARFIELD Co, 14 May; S of Teigen, PETROLEUM Co, 14 May and 10 Jun (both SKJ). *Polites draco*, East of Homestake Pass, JEFFERSON Co, 12 Jun (SKJ). *Amblyscirtes vialis*, E of Fort Benton, CHOUTEAU Co, 9 Jun (SKJ). *Megathymus streckeri*, Musselshell Rvr Bluffs, GARFIELD Co, 10 Jun; S of Teigen, PETROLEUM Co, 10 Jun (both SKJ). *Parnassius clodius*, N of Stony Lk, 7300', GRANITE Co, 13 July 1986 (CO). *P. phoebus*, PHILLIPS Co, 25-27 Jul (RAR). *Papilio machaon* (*bairdii*) *dodi*, 3 miles West of Sunburst, TOOLE Co, 9 May (NGK/SJK). *P. zelicacoon*, Lone Pine St Park, Flathead Co, 26 Apr, EARLY (RLH); S of Teigen, PETROLEUM Co, 10 Jun (SKJ); W of Forsyth, ROSEBUD Co, 16 Jun (SKJ). *P. indra*, S of Teigen, PETROLEUM Co, 10 Jun (SKJ). *P. multicaudatus*, East of Fort Benton, CHOUTEAU Co, 9 Jun; Musselshell Rvr Bluffs, GARFIELD Co, 10 Jun; Bull Mts, MUSSELSHELL Co, 11 Jun; S of Teigen, PETROLEUM Co, 10 Jun (all SKJ). *Neophasia menapia*, Two Dog Flat, near St Mary Lake, GLACIER Co, 8 Aug (D. Debinski/SJK); PHILLIPS Co, 25-27 July (RAR). *Pontia sisymbrii*, Prewett Crk Rec Area, SW of Great Falls, CASCADE Co, NE, 26 Apr (NGK/SJK). *P. protodice*, Musselshell Rvr Bluffs, N of Mosby, GARFIELD Co, 18 Aug & S of Teigen, PETROLEUM Co, 18 Aug (both SKJ). *Pieris rapae*, Powder Rvr, W of Terry, PRAIRIE Co, 16 Jun, now known from all except Jefferson Co (SKJ). *Euchloe hyantis*, Cottonwood Crk, East of Galen, DEER LODGE Co, 27 Apr (SKJ). *E. creusa*, 11 miles NW of Babb, GLACIER Co, STATE, ZONE 4, SOUTH, 7 May (SKJ). *E. olympia*, Musselshell Rvr Breaks, N of Mosby, GARFIELD Co, 14 May (SKJ); Jct Hwy 200 & 434, LEWIS & CLARK Co, 12 May (SKJ); 3 miles W of Sunburst, TOOLE Co, 9 May (NGK/SJK). *Anthocharis sara*, SW slope of West Butte, Sweetgrass Hills, TOOLE Co, 9 May (NGK/SJK). *Colias eurytheme*, Roberts Crk, W of Judith Gap, WHEATLAND Co, 17 Aug (SKJ). *C. alexandra*, Sunburst, Toole Co, 9 May, EARLY (NGK); Roberts Crk, W of Judith Gap, WHEATLAND Co, 17 Aug (SKJ). *C. interior*, Porphyry Peak, MEACHER Co, EAST, 8 Aug (NGK/SJK). *Lycaena hyllus*, Christensen Mdw, FLATHEAD Co, NW, 20 Jul; Kootenai Lk Trail, GLACIER Co, 29 Jul (both D. Debinski/SJK). *L. rubida*, Powder Rvr, W of Terry, PRAIRIE Co, 16 Jun (SKJ). *L. heteronea*, Highwood Mts, CHOUTEAU and JUDITH BASIN Counties, NE, 30 Jul (SKJ). *L. dorcas* (sensu Ferris), Highwood Mts, JUDITH BASIN Co, 30 Jul (SKJ). *Satyrus acadica*, Powder Rvr, W of Terry, PRAIRIE Co, 16 Jun (SKJ). *S. liparops*, N of Belt, CASCADE Co, 30 Jul (SKJ); Highwood Mts, CHOUTEAU Co, 30 Jul (SKJ); 4 miles N of Geyser, JUDITH BASIN Co, 30 Jul (SKJ); near Landusky, PHILLIPS

Co. 26 Jul (RAR). *S. saepium*, Porphyry Peak, MEAGHER Co, 8 Aug (NGK/SJK). *Mitoura siva*, Musselshell Rvr Breaks, near Mosby, GARFIELD and PETROLEUM counties, 14 May (SJK). *Incisalia augustus*, Little Snowy Mts, GOLDEN VALLEY Co, 14 May (SJK). *I. mossii schryveri*, Pike Crk 5600', PONDERA Co, NE, 10 May (RLH). *I. eryphon*, S of Teigen, PETROLEUM Co, NE, 14 May (SJK); SW slope of West Butte, Sweetgrass Hills, TOOLE Co, 9 May (NGK). *Strymon melinus*, Big Sheep Mts, PRAIRIE Co, 18 Aug (SJK). *Celastrina argiolus* (=ladon), Cottonwood Crk, E of Galen, DEER LODGE Co, 27 Apr (SJK). *Euphilotes enoptes*, 3 miles W of Sunburst, TOOLE Co, 23 May (NGK, T. Kral/SJK). *Plebejus idas*, Pike Crk, PONDERA Co, 21 Jul 1986 (RLH). *P. melissa*, McKay Crk, near Noxon, SANDERS Co, 28 Aug, now known from all MT counties (SJK). *P. saepiolus*, Musselshell Rvr Bluffs, GARFIELD Co, 10 Jun; E of Homestake Pass, JEFFERSON Co, 12 Jun; Bull Mts, MUSSELSHELL Co, 11 Jun; S of Teigen, PETROLEUM Co, 10 Jun (all SJK). *P. icarioides*, S of Teigen, PETROLEUM Co, 10 Jun (SJK). *P. acmon*, Polebridge, FLATHEAD Co, 15 Jun 1986 (RLH); Musselshell Rvr Breaks, N of Mosby, GARFIELD Co, NE, 14 May (SJK); E of Homestake Pass, JEFFERSON Co, 12 Jun (SJK); Musselshell Rvr Breaks, near Mosby, PETROLEUM Co, 14 May (SJK); 3 mi W of Sunburst, TOOLE Co, 23 May (NGK, T. Kral/SJK). *Euptoieta claudia*, Musselshell Rvr Bluffs, GARFIELD Co, 10 Jun & 18 Aug; Bull Mts, MUSSELSHELL Co, 11 Jun; S of Teigen, PETROLEUM Co, 10 Jun & 18 Aug (all SJK). *Speyeria cybele*, PHILLIPS Co, 25-27 Jul (RAR). *S. aphrodite*, Musselshell Rvr Bluffs, N of Mosby, GARFIELD Co, 18 Aug; Highwood Mts, JUDITH BASIN Co, 30 Jul; Big Sheep Mts, PRAIRIE Co, 18 Aug (all SJK). *S. edwardsii*, Big Sheep Mts, PRAIRIE Co, 18 Aug (SJK); SHERIDAN Co, NE, 17 Jun (A. Swengel/PAO). *S. coronis*, S of Teigen, PETROLEUM Co, 10 Jun (SJK); PHILLIPS Co, 25-27 Jul (RAR); Roberts Crk, W of Judith Gap, WHEATLAND Co, 17 Aug (SJK). *S. zerene*, Musselshell Rvr Bluffs, N of Mosby, GARFIELD Co, NE, 18 Aug (SJK). *S. callippe*, Musselshell Rvr Bluffs, GARFIELD Co, 10 Jun; Bull Mts, MUSSELSHELL Co, 11 Jun; E of Forsyth, ROSEBUD Co, 11 Jun (all SJK). *S. eglesis*, Roberts Crk, W of Judith Gap, WHEATLAND Co, 17 Aug (SJK). *S. hydaspe*, PHILLIPS Co, 25-27 Jul (RAR); Roberts Crk, W of Judith Gap, WHEATLAND Co, 17 Aug (SJK). *S. mormonia*, McKay Crk, near Noxon, SANDERS Co, 28 Aug (SJK). *Boloria kriemhild*, E of Homestake Pass, JEFFERSON Co, NW, 12 Jun (SJK). *Chlosyne acastus*, Musselshell River Breaks, North of Mosby, GARFIELD Co, 14 May; Musselshell River Breaks, near Mosby, PETROLEUM Co, 14 May (both SJK). *Phyciodes pascoensis*, E of Homestake Pass, JEFFERSON Co, 12 Jun (SJK); the *P. tharos* complex is now known from all MT counties. *Euphydryas anicia*, S of Teigen, PETROLEUM Co, NE, 14 May (SJK). *E. edita*, S of Teigen, PETROLEUM Co, 14 May (SJK). *Polygonia progne*, PHILLIPS Co, 25-27 Jul (RAR). *Nymphalis californica*, 6 miles NW of Babb, GLACIER Co, NE, 14 Jul (SJK). *N. vau-album*, PHILLIPS Co, 26 Jul (RAR). *N. milberti*, Musselshell Rvr Bluffs, GARFIELD Co, 10 Jun; S of Teigen, PETROLEUM Co, 10 Jun (both SJK). *Vanessa atalanta*, S of Teigen, PETROLEUM Co, 18 Aug; Powder Rvr, W of Terry, PRAIRIE Co, 16 Jun (both SJK). *Basilarchia arthemis*, PHILLIPS Co, 25-27 Jul (RAR). *Coenonympha inornata*, Bull Mts, MUSSELSHELL Co, 11 Jun (SJK). *C. ochracea*, Bull Mts, MUSSELSHELL Co, 11 Jun; S of Teigen, PETROLEUM Co, 10 Jun (both SJK). *Cercyonis meadii*, Musselshell River Bluffs, N of Mosby, GARFIELD Co, 18 Aug (SJK). *Oeneis uhleri*, Musselshell River Bluffs, N of Mosby, GARFIELD Co, 14 May (SJK).

MOTHS: No reports.

WYOMING. Contributors: BFC, RLH, PAO, RCR, EHW. The season was similar to that in MT.

BUTTERFLIES: About 187 data points were received, representing over 100 species and 32 new county records. One additional species was completed from all WY counties (*Colias eurytheme*), raising the total known from all counties to 4 species; an additional 6 species are known from all but one county. The WY avg number of species/county is now 85.88. *Erynnis persius*, SUBLETTE Co, late May-Aug (BFC). *Hesperia nevada*, Fitzpatrick Wilderness Area, FREMONT Co, summer 1986 (P. Kleintjes/PAO). *Polites sabuleti*, 4.5 miles E of Torrington, GOSHEN Co, EAST, 12 Sep (RCR). *Ochlodes sylvanoides*, Dubois, FREMONT Co, early Aug (BFC). *Amblyscirtes vialis*, Bear Crk Valley, Absaroka Mts, FREMONT Co, WEST, 1 Jul (BFC). *Papilio zelicaon* black fm *nitra*, Moon Lk, 10000', HIGH, FREMONT Co, 15 Jul (BFC). *P. indra*, Pine Mtn, NATRONA Co, May-Jun (BFC). *Pontia sisymbrii*, Fitzpatrick Wilderness Area, FREMONT Co, summer 1986 (P. Kleintjes/PAO); Casper Mtn, NATRONA Co, May-Jun (BFC). *Euchloe olympia*, Bear Crk Valley, Absaroka Mts, FREMONT Co, WEST, 1 Jul (BFC). *Colias eurytheme*, SUBLETTE Co, late May-Aug (BFC), now known from all WY counties. *Nathalis iole*, Lone Tree Cn, SW of Hawk Spgs, GOSHEN Co, 13 Sep (RCR). *Lycaena hyllus*, Douglas, 4800', CONVERSE Co, 20 Jun (RLH). *L. helloides*, 4.5 miles E of Torrington, GOSHEN Co, 12 Sep (RCR). *L. nivalis*, N Horseshoe Crk, 6000', LOW, Converse Co, 11 Jun, EARLY (RLH). *Callophrys sheridanii*, Pine Mtn, NATRONA Co, May (BFC). *C. apama*, Pine Mtn, NATRONA Co, May (BFC). *Incisalia augustus*, Pine Mtn, NATRONA Co, May (BFC). *Celastrina argiolus*, Casper Mtn, NATRONA Co, May (BFC). *Plebejus acmon*, Lone Tree Cn, SW of Hawk Springs, GOSHEN Co, 13 Sep (RCR). *Speyeria edwardsii*, SUBLETTE Co, mid Jun to mid Aug (BFC). *S. hydaspe*, Casper Mtn, NATRONA Co, July (BFC). *Boloria eunomia*, Long Lk, West side of Beartooth Plateau, Park Co, 26 Jun, EARLY (RLH). *B. bellona*, FREMONT Co, late Jun (BFC). *B. improba*, Absaroka Range, PARK Co, NORTH, mid Jul (BFC). *Euphydryas gillettii*, numbers down in 1987, in Fremont Co (BFC) and Park Co (EHW). *Polygonia faunus*, Fitzpatrick Wilderness Area, FREMONT Co, summer 1986 (P. Kleintjes/PAO). *Vanessa atalanta*, TETON and SUBLETTE counties, late Jun-Aug (BFC). *Erebia epipsodea*, Casper Mtn, NATRONA Co, May-Jul (BFC). *Oeneis uhleri*, TETON and SUBLETTE counties, late May-Jul (BFC). *O. polixenes* and *O. taygete*, TETON Co, Jun-Jul (BFC).

MOTHS: A great year for Arctiidae in the Wind River and Absaroka Mts (BFC). *Apantesis figurata*, *A. nevadensis*, *A. parthenica*, *A. phyllira*, *A. proxima* and *A. virguncula*, Wind River and Absaroka Ranges, Fremont Co, Jun-Jul (BFC). *Arctia caia*, *Haliosidota maculata*, *Parasemia plantaginis* and *Phragmatobia fuliginosa*, common in Wind Rivers and Absarokas, Jun-Jul (BFC). *Turpentina permaculata* had two broods in Fremont Co, late Jun and mid Aug (BFC). *Platyprepia virginalis*, Pine Mtn, 25 miles W of Casper, NATRONA Co, 17 Jun 1985 (BFC). *Gnophaela vermiculata*, common, Teton Range, Teton Co, Jul-Aug (BFC). *Pheosia rimosa* and *Harypia borealis*, common, Wind Rivers and Absarokas, Fremont Co, Jul-Aug (BFC). Several other species reported in last year's Summary were again common in the Wind Rivers and Absarokas in 1987 (BFC).

UTAH. Contributors: GBC, JLH, RCM, PJS, MJS, SWS. No one commented on the season in terms of weather or other factors.

BUTTERFLIES: I received only 29 data points this year, representing 22 county records and 26 species. No additional species were reported from all counties. The average number of species/county is now 93.31, not counting CFG records unknown to me. *Epargyreus clarus*, larvae, Duchesne Rvr at Miton Bridge, DUCHESNE Co, 29 Aug (SWS). *Thorybes mexicana*, Forest Road 40 at Castle Crk, IRON Co, 17 Jun (PJS). *Erynnis brizo*, E slope of Beaver Dam Mts, Washington Co, 15 Mar 1986, EARLY (PJS). *Pholisora catullus*, Laketown Resrv, 1.8 mi SSE of Laketown, 6100', RICH Co, 19 Jun (SWS). *Piruna pirus*, Laketown Resrv, 1.8 mi SSE of Laketown, 6100', RICH Co, 20 Jun (SWS). *Polites sabuleti*, Roosevelt, 5100', DUCHESNE Co, 2 Jun 1985 (A. R. Myrup/JLH); 1.5 miles NE of jct UT 30 & Rd 145, 5900', RICH Co, 20 Jun (SWS). *P. draco*, Lodgepole Cn, 2.8 miles E of Elk Vy Guard Station, 7000', CACHE Co, 20 Jun (SWS). *Papilio polyxenes coloro*, W slope of Beaver Dam Mts, Washington Co, 26 Jan 1986, EARLY (PJS). *P. indra*, N side of St George, Washington Co, 22 Feb 1986, EARLY (PJS). *P. eurymedon*, Rilda Cn, 0.9 miles from Huntington Crk, 8200', EMERY Co, 18 Jul (SWS). *Pontia sisymbrii*, delete record from EMERY Co reported last year as the specimen is *P. beckeri* (JLH). *P. protodice*, Webb Hill, St George, Washington Co, 26 Jan 1986, EARLY (PJS). *Anthocharis pima*, Webb Hill, St George, Washington Co, 21 Feb 1986, EARLY (PJS). *Colias eurytheme*, Washington Fields, Washington Co, 19 Jan 1986, EARLY (PJS). *Lycaena helloides*, Stout Cn, KANE Co, 25 May 1986 (PJS). *Satyrus titus*, Stout Cn, KANE Co, 6 Jul 1986 (PJS). *S. calanus*, delete record from WAYNE Co

reported last year; the specimen is *S. saepium*, a county record (JLH). *Callophrys paradoxa*, 3.5 mi S of Cannonville, Kane Co, 26 Apr (PJS). *C. affinis*, Rilda Cn, 0.9 miles from Huntington Crk, 8200', EMERY Co, 23 Jun (SWS). *Incisalia fotis*, W slope of Beaver Dam Mts, Washington Co, 23 Feb 1986, EARLY (PJS). *Plebejus acmon*, Rilda Cn, 0.9 miles from Huntington Crk, 8200', EMERY Co, 23 Jun (SWS). *Apodemia mormo*, Mouth of Farmington Cn, 4800', DAVIS Co, 16 Aug (SWS). *Speyeria egleis*, Blind Stream, 5 miles N of Hanna, 8100', DUCHESNE Co, 29 Aug (SWS). *Phyciodes mylitta*, delete record from WEBER Co reported last year; the specimen is *P. pallida*, a county record (JLH). *P. pallida*, Rilda Cn, 0.9 miles from Huntington Crk, 8200', EMERY Co, 18 Jul; Laketown Resvr, 1.8 miles SSE of Laketown, 6100', RICH Co, 20 Jun (both SWS). *Nymphalis californica*, upper Logan Cn, CACHE Co, 30 Jul 1982 (GBG); IRON Co, several localities, 1987 (PJS); common, with larvae on *Ceanothus fendleri*, Stout Cn, KANE Co, 31 May (PJS). *Vanessa virginiensis*, Bug Lk, head of Laketown Cn, 7800', RICH Co, 19 Jun (SWS). *V. carye annabella*, 5.3 miles NE of Acord Lks, Little Duncan Mtn, 9000', SEVIER Co, 22 Jun (SWS). *V. atalanta*, Blind Stream, 5 miles N of Hanna, DUCHESNE Co, 29 Aug (SWS).

MOths: *Coloradia pandora*, 2.5 miles N of Fairview, Sanpete Co, 4 Aug (RCM). *Gloveria gargamelle*, Beaver Dam Mts, WASHINGTON Co, STATE, NORTH, 4 Sep (PJS). *Hemileuca burnsi*, larvae on 3 species of plants in Washington Co, Apr: *Dalea fremontii*, *Tetradymis spinosa*, and *Prunus fasciculatum* (PJS). *H. eglanterina*, larvae on *Rosa*, Stout Cn, Kane Co, early Jun (PJS). *H. electra clio*, larvae on *Eriogonum fasciculatum* var. *poliofolium*, Hwy 91, SW of Shivwits, East slope of Beaver Dam Mts, WASHINGTON Co, STATE, NORTH, 8 and 13 March (PJS, MJS); adults same locality 12 and 19 Sep (PJS). *H. griffini*, larvae on *Coelogyne* and *Ephedra*, Hwy 89, 2.5 miles NW of Arizona state line, KANE Co, 25 Apr (PJS). *H. nevadensis*, larvae on *Salix exigua*, 5 miles NNW of Cedar City, Iron Co, 19 Jun; adults common 3 Oct (PJS, MJS). *H. nuttalli*, larvae on *Symphoricarpos rotundifolius*, Cedar Mtn Rd, SE of Cedar City, Iron Co, 31 May and 19 Jun (PJS, MJS). *H. neumoegeni*, Dinosaur Natl Monument, Green River Cg, Uintah Co, 22 Aug (RCM). *Sphinx doli*, 2.5 miles N of Fairview, Sanpete Co, 16 Jun (RCM). *Arctia caja*, Brown's Park at Jarvie Ranch, Daggett Co, 23 Aug (RCM). *Cisthene* sp., Orem, Utah Co, 16 Jul (RCM). *Grammia nevadensis* and *G. virguncula*, Brown's Park at Jarvie Ranch, Daggett Co, 23 Aug (RCM). *G. parthenice*, 2.5 miles N of Fairview, Sanpete Co, 23 Jul (RCM). *Kodiosoma fulvum*, St George, WASHINGTON Co, STATE, 17 Apr 1948 (G. E. Bohart/RCM). *Notarctia proxima*, Brown's Park Wildlife Mgmt Area, Daggett Co, 28 Jun (C. R. Nelson/RCM). *Pararctia lapponica*, Bald Mtn, Summit Co, 24 Jul (J. Levy/RCM). *Parasemia plantaginis*, East Park Resvr, county not specified, 4 Jul 1986 (A. R. Myrup/RCM). *Pyrrharctia isabella*, Brown's Park Wildlife Mgmt Area, Daggett Co, 28 Jun (C. R. Nelson/RCM); larvae, near Myton, Duchesne Co, 9 Sep 1986 (A. R. Myrup/RCM). *Spilosoma virginica*, Haydan-White Rocks Rd, Uintah Co, 10 Jul 1985 (A. R. Myrup/RCM). *Turuptiana permaculata*, White Rvr, 3 miles S of Bonanza, Uintah Co, 21 Aug (RCM).

COLORADO. Contributors: BFC, TSD, SLE, SAJ, LCK, RLK, JLO, PAO, RCR, JAS, RES. It was another long season, with many EARLY and LATE records, and another good year for southern occasional species.

BUTTERFLIES: I am including 104 of about 150 data points received, representing 71 species and 46 county records. One more species was completed from all 63 CO counties. *Nymphalis antiopa*, raising the total known from all to 6 species. The CO average number of species/county is now 99.89; we need only 7 county records to reach 100 avg sp/co. Only AZ, CA, NM and NV are already over 100 avg sp/co. *Erynnis horatius*, two fresh males, representing a third generation, Green Mtn, Jefferson Co, 1 Sep, LATE (JAS). *Pyrgus ruralis*, Rattlesnake Jack's, Larimer Co, 18 Apr, EARLY (BFC). *Piruna pirus*, Rattlesnake Jack's, Larimer Co, 9 May, EARLY (BFC). *Hesperia uncas*, 1 mile NE of Mt Judge, 9100', CLEAR CREEK Co, 28 Jul (JAS); Queen's Lake SWA, Kiowa Co, 4 Oct, LATE (PAO/RES). *H. juba*, Jefferson Co, 23 Oct, LATE; oviposition on *Bromus tectorum* and *Bouteloua gracilis* (JAS). *H. leonardus montana*, Foxton Rd at N Fk S Platte Rvr, Jefferson Co, 29 Sep, LATE (S. M. Nelson/LCK). [JAS has offered the following observations on late summer *Hesperia* in Jefferson Co. About 120 ova were found in Sep-Oct. *H. comma* and *H. juba* ova are small and stay white; *comma* has a basal flange which *juba* lacks; *montana* ova are larger and turn pinkish, without flange; the first stage larvae differ in setae also; *comma* ova hibernate while *juba* and *montana* hatch and overwinter as small larvae; *comma* prefers to eat *Carex heliophila* but will eat *Bouteloua gracilis*; *montana* prefers *Bouteloua* but will eat *Carex* too.] *H. ottoe*, below Spring Crk Dam, 5200', Larimer Co, 14 Jun, EARLY (RES). *H. pahaska*, Rist Cn, Larimer Co, 25 Apr, EARLY (BFC). *H. viridis*, Rattlesnake Jack's, Larimer Co, 2 May, EARLY (BFC). *Polites draco*, Rattlesnake Jack's, Larimer Co, 18 Apr, EARLY (BFC). *P. mystic*, 1 mile NE of Mt Judge, 9100', HIGH, Clear Creek Co, 31 Jul (JAS). *Euphyes vestris*, Rattlesnake Jack's, Larimer Co, 9 May, EARLY (BFC); Cover Mtn, 9300', HIGH, Park Co, 18 Jul 1982 (SAJ). *E. bimacula*, W of Ft Morgan, MORGAN Co, 28 Jun (JAS). *Amblyscirtes vialis*, two fresh males at Messex SWA, first evidence of a second generation in CO, WASHINGTON Co, EAST, 18 Jul (RES). *A. eos*, fresh male, 1.5 miles S of Las Animas, 3900', Bent Co, 1/ Jul (RES). *Parnassius phoebus*, Rattlesnake Jack's, Larimer Co, 18 Apr, EARLY (BFC). *Battus philenor*, Kit Carson, 4300', CHEYENNE Co, 17 Jul (RES). *Papilio polyxenes asterius*, Cheyenne Wells, CHEYENNE Co, 17 Jul (RES); Ordway Resvr, 4400', CROWLEY Co, 16 Jul (RES); fm *pseudomericus*, fresh male, Green Mtn, Jefferson Co, 1 Sep, LATE (JAS). *P. multicaudatus*, Cheyenne Wells, CHEYENNE Co, 17 Jul; Limon, 5365', LINCOLN Co, 16 Jul; Rocky Ford SWA, 4150', OTERO Co, 17 Jul (all RES). *P. eurymedon*, Rattlesnake Jack's, Larimer Co, 25 Apr, EARLY (BFC). *P. cressphontes*, Hospital Rd, Brush, MORGAN Co, 29 Aug 1983 (JLO). *Pieris rapae*, Denver, 4 Nov, LATE (RES). *Pontia sisymbrii*, Carrizo Picnic Area, 20 mi W of Campo, BACA Co, SE, 11 Apr (PAO). *Euchloe olympia*, Wildcat Crk, 5 mi N of Ft Morgan, MORGAN Co, 10 May 1981 (JLO). *Colias alexandra*, Rattlesnake Jack's, Larimer Co, 25 Apr, EARLY (BFC). *Zerene cesonia*, SR 207 at Arkansas Rvr, CROWLEY Co, 3 Oct, LATE (PAO/RES); Muir Spgs, 3 mi NW of Ft Morgan, MORGAN Co, 29 Jul 1983 (JLO). *Phoebis sennae*, Ft Morgan Canal at Bijou Crk, MORGAN Co, 22 Aug 1984 (JLO). *Eurema mexicana*, 1 mile NE of Mt Judge, 9100', Clear Creek Co, 5 Aug (JAS); Burlington, 4160', KIT CARSON Co, 18 Jul (RES); N Rush Crk at SR 71, 5400', LINCOLN Co, 16 Jul (RES); Holyoke, 3720', PHILLIPS Co, 18 Jul (RES). *E. nicippe*, 1 mile NE of Mt Judge, 9100', Clear Creek Co, 5 Aug (JAS); Ft Collins, Larimer Co, 30 Apr 1986, EARLY (SLE). *Lycaena hyllus*, Purgatoire Rvr, 2.5 mi S of Las Animas, BENT Co, 3 Oct (PAO/RES); 4.1 miles N of Manzanola, SR 207, CROWLEY Co, 3 Oct (RES). *L. helloides*, Flagler SWA, 4700', 4 mi E of Flagler, KIT CARSON Co, 16 Jul (RES). *Satyrus sylvinus*, Delta Co, 30 Jun 1985, EARLY (RLK); Austin Bluffs, EL PASO Co, NORTH, 1 Aug 1984 (SAJ). *S. saepium*, 1 mi up N Fk Clear Creek, GILPIN Co, 10 Aug (JAS). *Callophrys apama*, Cover Mtn, 9450', Park Co, 3 Aug 1984, LATE; and several other early Aug records in El Paso Co suggesting a second generation (SAJ). *Brephidium exile*, Montrose Co, common up through 13 Nov, LATE (RLK). *Hemiargus isolus*, Lafayette, Boulder Co, 4 Apr, EARLY (BFC). *Everes amynntula*, third generation, Chimney Gulch, Jefferson Co, 11 Oct, LATE (JAS). *Euphilotes rita*, 7.5 mi N of Wellington, LARIMER Co, NORTH, 28 Jul (PAO). *Plebejus melissa*, Rist Cn, Larimer Co, 18 Apr, EARLY (BFC). *P. glandon rustica*, Rattlesnake Jack's, Larimer Co, 2 May, EARLY (BFC). *P. saepiolus*, Rist Cn, Larimer Co, 25 Apr, EARLY (BFC). *P. icarioides*, Rattlesnake Jack's, Larimer Co, 2 May, EARLY (BFC). *P. acmon*, S edge of Nee Noshe Resvr, KIOWA Co, 4 Oct (PAO/RES). *Libytheana bachmanii*, Ft Collins, Larimer Co, 17 Jun 1986, EARLY (SLE). *Dione vanillae*, NE of Mt Judge, 9100', CLEAR CREEK Co, 5 Aug (JAS); Flagler SWA, 4700', 4 mi East of Flagler, KIT CARSON Co, 16 Jul (RES); 1.5 mi W of Bonny Resvr, 3700', Hwy 385, YUMA Co, 18 Jul (RES). *Speyeria idalia*, Chimney Gulch, JEFFERSON Co, 27 Jul (JAS); Ft Morgan, MORGAN Co, 5 Jul 1984 (JLO); near Fish Crk, 8700', S of Lake George, PARK Co, 2 Aug (T. C. Emmel/PAO). *S. aphrodite*, Lafayette, Boulder Co, 24 Oct, LATE (BFC). *S. edwardsii*, Rattlesnake Jack's, Larimer Co, 18 Apr, EARLY; Lafayette, Boulder Co, 24 Oct, LATE (both BFC). *S. coronis*, Rattlesnake Jack's Larimer Co, 2 May, EARLY (BFC); Van Bibber Crk, Jefferson Co, 25 Sep, LATE (JAS). *S. zerene*, Rattlesnake Jack's, Larimer Co, 9 May, EARLY (BFC).

Chlosyne palla, Rattlesnake Jack's, Larimer Co, 25 Apr, EARLY (BFC). *C. damoetas*, nr American Lakes, 11500', JACKSON Co, 19 Jul 1986 (Peacock/PAO). *Phyciodes pallida*, egg mass found under *Cirsium ochrocentrum* leaf, Red Rocks Park, Jefferson Co, 15 Jun (JAS); Lory St Park, Larimer Co, 12 Oct, LATE (PAO). *P. phaon*, always a rare catch in CO, S edge of Nee Noshe Resvr, KIOWA Co, 4 Oct, LATE (PAO, RES). *P. vesta*, NE of Mt Judge, 9100', CLEAR CREEK Co, 31 Jul (JAS); Flagler SWA, 4700', 4 mi E of Flagler, KIT CARSON Co, 16 Jul (RES). *Polygonia interrogationis*, Lafayette, Boulder Co, 31 Oct, LATE (BFC); Kiowa Crk, 4200', Eads, KIOWA Co, 17 Jul (RES). *P. comma*, Kit Carson, 4300', CHEYENNE Co, 17 Jul; Holyoke, 3720', PHILLIPS Co, 18 July (both RES). *P. satyrus*, Barr Lake, Adams Co, 29 Oct, LATE (JAS). *Nymphalis antiopa*, Kit Carson, 4300', CHEYENNE Co, 17 Jul, now known from all CO counties (RES). *Vanessa cardui*, Olathe, Montrose Co, 4 Dec, LATE (RLK). *V. carye annabella*, Lafayette, Boulder Co, 31 Oct, LATE (BFC); Ft Morgan, MORGAN Co, 1 Sep 1982 (JLO). *Junonia coenia*, Carrizo Picnic Area, BACA Co, 12 Aug (PAO); Purgatoire Rvr, 2.5 mi S of Las Animas, BENT Co, 3 Oct (PAO/RES); several records, Jefferson Co, Jul-Sep (JAS); Flagler SWA, 4700', 4 mi E of Flagler, KIT CARSON Co, 16 Jul (RES); Ft Morgan, MORGAN Co, 20 Jul 1981 (JLO); Rocky Ford SWA, 2.5 mi NE of Rocky Ford, OTERO Co, 3 Oct (PAO/RES). *J. nigrosuffusa*, Two Buttes, BACA Co, STATE, NORTH, 10 Aug (PAO). *Basilarchia archippus*, Two Buttes Dam, BACA Co, SE, 10 Aug (PAO); Purgatoire Rvr, 2.5 mi S of Las Animas, Bent Co, 3 Oct, LATE (RES); Kassler, Jefferson Co (confirmatory county record), 11 Sep (JAS). *B. weidemeyerii*, Denver, 4 Nov, LATE (RES). *Anaea andria*, Barr Lake, Adams Co, 17 Aug, 30 Aug, 8 Sep (JAS). *Danaus plexippus*, Lafayette, Boulder Co, 14 Nov, LATE (BFC). *D. gilippus*, NE of Mt Judge, 9100', Clear Creek Co, 5 Aug (JAS). *Coenonympha ochracea*, Rist Cn, Larimer Co, 18 Apr, EARLY (BFC). *Oeneis chryxus*, Rist Cn, Larimer Co, 18 Apr, EARLY (BFC).

MOTHS: *Hyalophora gloveri*, foothill canyons of Boulder and Larimer counties, early Jun (BFC). *Euproserpinus wiesti*, over 50 seen at Weld Co site, 3rd week of May (BFC). *Smerinthus jamaicensis*, Boulder, Larimer and Weld counties, late May to mid Jun (BFC). *Sphinx vashti*, Boulder, Larimer and Weld counties, late May to mid Jun (BFC). *Arctia caja americana*, Steamboat Spgs, Routt Co, date not given (RCR). *Leparctia lena*, Rattlesnake Jack's, Larimer Co, 15 May (BFC). *Zenodoxus canescens*, series, 7.5 mi N of Wellington, Larimer Co, 28 Jul (PAO). All remaining records are from TSD, who thanks D. C. Ferguson for determinations of Arctiidae and J. D. Lafontaine for determinations of Noctuidae. County abbreviations: Gr = Grand; Je = Jefferson; Mg = Morgan; Ro = Routt. *Doa ampla*, Je, Jul. *Cisthene barnesii*, Gr, Jul. *Hypoprepia inculta*, Gr, Jul. *Bruceia pulverina*, Je, Jul. *Phragmatobia fuliginosa rubricosa*, Mg, Jul. *Neoarctia brucei*, Gr, Jul 1980. *Apantesis carlotta*, Mg, May. *Lophocampa roseata occidentalis*, Gr, Jul. *Hemihyalaea labecula*, Je, Jul. *Cynia oregonensis*, Mg, May. *Ectypia clio*, Je, Jul. *Pygarctia spraguei*, Mg, Jul. *Agrotis vetusta*, Gr, Aug. *A. daedalus*, Mg, May. *Trichosilia mollis*, Gr, Jul 1984. *Agrotis atha*, Gr, May. *A. volubilis*, Gr, May. *A. ipsilon*, Gr, Aug. *Feltia jaculifera*, Mg, Aug. *F. subgothica*, Mg, Aug. *F. herilis*, Mg, Aug. *Copablepharon grande*, Mg, Aug. *C. sp. nov.*, Gr, Jul. *Euxoa divergens*, Gr, Jul 1984. *E. messoria*, Mg, Aug. *E. scandens*, Mg, Jul. *E. lewisi*, Gr, Jul. *E. altens*, Ro, Jun. *E. auxiliaris*, Gr, Jul. *E. terrealis*, Gr, Jul. *E. intermontana*, Gr, Aug. *E. mimallonis*, Gr, Aug. *E. septentrionalis*, Mg, Aug. *E. antica*, Gr, Jul. *E. intrita*, Gr, Aug. *E. rufula*, Gr, Aug. *E. pimensis*, Je, Jul. *E. declarata*, Gr, Aug. *E. punctigera*, Je, Jul. *E. misturata*, Gr, Aug. *E. atristrigata*, Gr, Aug. *E. nevada*, Gr, Aug. *E. aequalis alko*, Gr, Aug. *E. comosa comosa*, Gr, Aug. *E. comosa annir*, Gr, Aug. *E. satiens*, Gr, Aug. *E. setonia*, Gr, Jul. *E. basalis*, Gr, Jul. *E. plagigera*, Gr, Aug. *E. tessellata*, Gr, Aug. *E. albipennis*, Gr, Aug. *E. lilloet*, Je, Jul. *E. obeliscoides*, Gr, Aug. *E. choris*, Gr, Aug. *E. idahoensis*, Gr, Aug. *E. olivialis*, Gr, Aug. *E. oblongistigma*, Gr, Aug. *E. moerens*, Gr, Aug 1985. *E. auripennis*, Gr, Aug. *E. servita*, Gr, Aug. *E. munis*, Gr, Aug 1985. *E. ridingsiana*, Gr, Aug 1980. *E. castanae*, Gr, Jul. *E. inscripta*, Gr, Aug 1985. *E. lidia thanatologia*, Gr, Jul. *Loxagrotis grotei*, Gr, Aug. *L. albicosta*, Mg, Jul. *Richia chortalis*, Gr, Aug. *R. parentalis*, Gr, Aug. *Pseudorthosia variabilis*, Gr, Aug. *Ochropleura plecta*, Gr, Jun. *Euagrotis beata*, Je, Jul. *E. bairdii*, Je, Jul. *E. tepperi*, Gr, Jul. *Crassivesica bocha*, Gr, Aug. *Peridroma saucia*, Gr, Aug. *Diarsia dislocata*, Gr, Jul. *D. rosaria pseudorosaria*, Gr, Jul. *Protexarnis balanitis*, Gr, Aug. *Spaelotis clandestina*, Gr, Aug. *S. sp. nov.* near *havilae*, Ro, Jun. *Graphiphora haruspica inopinatus*, Gr, Aug. *Eurois occulta*, Gr, Aug. *E. stricta*, Gr, Aug. *E. nigra*, Gr, Aug. *Xestia bolteri*, Je, Jul 1986. *X. dolosa*, Ro, Jun. *X. smithii*, Gr, Aug. *X. oblata streckeri*, Ro, Jun. *X. collaris*, Gr, Aug. *Anomogyna atrata*, Gr, Jul 1986. *A. perquiritata partita*, Gr, Jul 1984. *A. imperita*, Gr, Jul 1986. *A. vernilis*, Gr, Aug. *Setagrotis pallidicollis*, Gr, Aug. *S. radiatus*, Gr, Aug. *S. atrifrons*, Gr, Aug. *S. piscipellis*, Gr, Aug. *S. corrodora*, Gr, Aug. *Agrotiphilla colorado*, Gr, Jul 1979. *Paradiarsia littoralis*, Gr, May. *Anaplectoides prasina*, Je, Jul. *A. pressus*, Ro, Jun. *Chersotis juncta*, Gr, Jul. *Protolampra rufipictus*, Gr, Aug. *Eueretagrotis perattenta*, Gr, Jul. *Abagrotis vittifrons*, Gr, Aug. *A. trigona*, Gr, Aug. *A. mirabilis*, Gr, Aug. *A. glenni*, Gr, Aug. *A. nefascia*, Gr, Aug. *A. crumbi*, Gr, Aug. *A. nanalis*, Gr, Aug. *A. duanca*, Gr, Jul. *A. reedi*, Gr, Aug. *A. placida*, Gr, Aug. *A. dodi*, Gr, Aug. *Rhynchagrotis cupida*, Je, Jul 1986. *R. anchocelioides*, Je, Jul 1986. *R. exertistigma*, Gr, Jul. *Pronoctua typica*, Gr, Aug.

NEW MEXICO. Contributors: SJC, CDF, RHL, RCM, RES. It was another early season, with several records for southern "oddball" species.

BUTTERFLIES: I am including 42 of about 100 data points received, representing 40 species, 41 county records and 2 state records (*Euides isabella*, *Thessalia chinatiensis*). No more species were completed from all counties. The NM average number of species per county is now 102.15, which is behind only AZ (127.20) and NV (102.29). *Erynnis horatius*, Canon Juan Maestas, MORA Co, 3 Jul (SJC). *E. afranius*, Canon Juan Maestas, MORA Co, 3 Jul (SJC); delete record from EDDY Co published in last year's Summary; the specimen is *E. persius*, a county record and SOUTH range extension as well as an EARLY record. *Oarisma edwardsii*, Canon Juan Maestas, MORA Co, 3 Jul (SJC). *Hylephila phyleus*, Mangas Springs, 4900', GRANT Co, 24-26 Jul (CDF). *Stinga morrisoni*, CHAVES Co (R. W. Holland/SJC). *Hesperia uncas*, Rio Grande Gorge, TAOS Co, 29 Jul (CDF). *H. nevada*, 11 mi NW of Ocate, MORA Co, 5 Jul (SJC). *Atrytone logan*, Canon Juan Maestas, MORA Co, 3 Jul (SJC). *Ochlodes snowi*, Coyote Crk-St Park, MORA Co, 15 Aug (SJC). *Amblyscirtes simius*, Bullis Cn, CHAVES Co, 29 Aug (R. W. Holland/SJC). *A. osleri*, gulch 18 mi NW of Tucumcari, SR 104, SAN MIGUEL Co, 5 May (RES). *Battus philenor*, Canon Juan Maestas, MORA Co, 3 Jul (SJC). *Papilio multicaudatus*, Logan, QUAY Co, 5 Jun (SJC). *Neophasia menapia*, Coyote Crk St Park, MORA Co, 15 Aug (SJC). *Colias scudderii*, near Cerro Vista, MORA Co, 15 Aug (SJC). *Eurema mexicana*, 6 mi NW of Ocate, MORA Co, 3 Jul (SJC). *Lycaena arota*, Coyote Crk St Park, MORA Co, 15 Aug (SJC). *Atlides halesus*, Thayer Hill, Eddy Co, 21 Feb, EARLY (R. W. Holland/SJC). *Satyrus calanus*, 10 mi NW of Ocate, MORA Co, 16 Aug (SJC). *Phaostrymon alcestis*, 10 mi E of Mosquero, HARDING Co, 5 Jun (SJC). *Fixsenia ontario violae*, Canon Juan Maestas, MORA Co, 3 Jul; 10 mi E of Mosquero, HARDING Co, 5 Jun (both SJC). *Apodemia mormo*, Cone Butte, Eddy Co (2nd county record), 7 May (P. A. Opler, RES). *Euides isabella*, near Dunken, CHAVES Co, STATE, ZONE 4, NORTH, 6 Jun 1980 (K. E. Peyton/SJC). *Dione vanillae*, Last Chance Cn, 4450', 3.5 mi NE of Sitting Bull Falls, Eddy Co, 6 May, EARLY (RES); Canon Juan Maestas, MORA Co, 3 Jul (SJC). *Speyeria mormonia*, near Cerro Vista, MORA Co, 15 Aug (SJC). *S. atlantis*, 10 mi NW of Ocate, MORA Co, 16 Aug (SJC). *Thessalia chinatiensis*, Rattlesnake Spg, EDDY Co, STATE, ZONE 4, NORTH, 2 Jun (R. W. Holland/SJC). *Chlosyne gorgone*, Canon Juan Maestas, MORA Co, 3 Jul (SJC). *Phyciodes tharos* (A), Clayton Lake, UNION Co, 5 May (P. A. Opler, RES/SJC). *P. vesta*, Mangas Spgs, 4900', GRANT Co, 24-26 Jul (CDF); near Logan, QUAY Co, 5 Jun (SJC). *P. mylitta*, Rio Hondo at Twining, TAOS Co, 24 Jul (SJC). *Texola elada ulrica*, Rocky Arroyo, Eddy Co, 7 May (SJC). *Polygonia satyrus*, 10 mi E of Mosquero, HARDING Co, SE, 5 Jun (SJC). *Vanessa carye annabella*, near North

Fork Lk, MORA Co, 4 Jul (SJC). Junonia coenia, Canon Juan Maestas, MORA Co, 3 Jul (SJC). Adelpha bredowii, 11 mi NW of Ocate, MORA Co, 5 Jul (SJC). Anaea aidea, Bullis Cn, CHAVES Co, NORTH, 29 Aug (R. W. Holland/SJC). A. andria, Canon Juan Maestas, MORA Co, 3 Jul (SJC). Megisto rubricata, Canon Juan Maestas, MORA Co, NORTH, 3 Jul (SJC). Oeneis melissa, near North Fork Lk, MORA Co, 4 Jul (SJC). O. polixenes, near North Fork Lk, MORA Co, 4 Jul (SJC).

MOTHS: Aemilia ambigua, Philmont Scout Ranch, Colfax Co, 22 Jun (RCM). Amalia ambigua, Jct of Red Cn and Ox Cn Rds, 7400', Manzano Mts, Torrance Co, 28 Jul (CDF). Antepione comstocki, Pinos Altos, Grant Co, 14 Aug (RHL). Arachnis picta, Philmont Scout Ranch, Colfax Co, 22 Jun (RCM). Bertholdia trigona, Jct of Red Cn and Ox Cn Rds, 7400', Manzano Mts, Torrance Co, 28 Jul (CDF). Cirrhobolina mexicana, hill 3.0 mi ENE of Hillsboro, 5300', SIERRA Co, ?STATE, ZONE 4, NORTH, 31 Jul 1986 (RES). Coloradia pandora, Pinos Altos, Grant Co, 14 Aug (RHL). Copablepharon serratacorne, Las Cruces, Dona Ana Co, 11 Aug (RHL). Estigmene acrea, Philmont Scout Ranch, Colfax Co, 22 Jun (RCM). Hyparpax rosea, Pinos Altos, Grant Co, 14 Aug (RHL). Lophocampa maculata, Philmont Scout Ranch, Colfax Co, 22 Jun (RCM). Paramiana laetabilis, Pinos Altos, Grant Co, 14 Aug (RHL). Stenoporpia purpuraria, Pinos Altos, Grant Co, 14 Aug (RHL). Trichocosmia drasterioides, Las Cruces, Dona Ana Co, 11 Aug (RHL). Turuptiana permaculata, Philmont Scout Ranch, Colfax Co, 22 Jun (RCM).



ZONE 5 PLAINS: SASKATCHEWAN, MANITOBA, NORTH DAKOTA, SOUTH DAKOTA, NEBRASKA, KANSAS. Coordinator: Richard C. Rosche (RCR). Contributors: J. Adams (JA via CAE), Tanya Bray (TB), Jo Brewer (JB), M. Brohman (MB via RCR), Neil E. Dankert (ND), Charles A. Ely (CAE), E. A. Froemel (EAF), Bonnie L. Gibbons (BLG), Roger D. Grigg (RDG via NED), Chris Hammond (CH via CAE), Robin Harding (RH via NED), Dru Heidemann (DHE via RCR), Darryl Honas (DHO via CAE), Ronald R. Hooper (RRH), Tom E. Horabik (TEH via NED), William H. Howe (WHH), Dave Jenson (DJ via NED), Lanny Kizer (LK via NED), Paul Klassen (PK), Robert Kruger (RK via NED), Trevor Larsen (TL via NED), H. Randy Lawson (HRL via RCR), Douglas R. Long (DRL via NED), Stanley Longfellow (SL via NED), Gary M. Marrone (GMM), Lew Mueller (LM), Harold G. Nagel (HGN via NED), Byron W. Nilson (BWN via NED), James Oberfoell (JB via RAR), Chris Opler (CO via PAO), Paul A. Opler (PAO), Barbara Padelford (BP), Loren Padelford (LP), Floyd W. Preston (FWP), June D. Preston (JDP), Lanny Randolph (LR via NED), Brett Ratcliffe (BR via NED), James Reiser (JRe via NED), Gail Roebuck (GR via RCR), Marvin E. Rolfs (MER via CAE), Dorothy J. Rosche (DJR), Adam Royer (AR via RAR), Jesse Royer (JRo via RAR), Ronald A. Royer (RAR), C. Rudnick (CR via RCR), Marvin D. Schwilling (MDS via CAE), James A. Scott (JAS), Franklin Snocker (FS via RCR), Stephen M. Spomer (SMS), Ray E. Stanford (RES), Mike Stewart (MS via NED), DeWayne Thomsen (DT via NED), Neil Thomsen (NT via NED), Matt Treffer (MT via NED), Clayton True (CT via NED), Eric Volden (EV via RCR), John Weber, Jr. (JW), Barbara L. Wilson (BLW), William D. Winter, Jr. (WDW), Vernon L. Wranosky (VLW), Vernon L. Wranosky III (VLW). COUNTY, STATE (in caps) = new county, state records; NORTH, SOUTH, EARLY, LATE, etc. (in caps) are also considered unusual by the contributor and/or coordinator. Abbreviations: Cyn=Canyon; Co/Cos=county/counties; coll=collected/collection; CSC=Chadron State College; E=east; Ft=Fort; GMA=Game Management Area; KSC=Kearney State College; L=Lake; max=maximum; mi=mile/miles; Mt/Mts=Mountain/Mountains; N=north; NP=National Park; nr=near; NWR=National Wildlife Refuge; NW=northwest; PF=Provincial Forest; PP=Provincial Park; Pres=Preserve; R=River; RA=Recreation Area; Res=Reservoir; S=south/southern; SE=southeast; sp=species; spec=specimen; SP=State Park; SRA=State Recreation Area; sap=subspecies; SW=southwest; ver=verified; W=west; WMA=Wildlife Management Area.

SASKATCHEWAN. The season was dry with an exceptionally hot June and a very long autumn. Provincial Coordinator: RRH. **BUTTERFLIES:** Ancyloxypha numitor, Shoal L, NORTHWEST, 9 July. Euchloe ausonides, Tadmore, 7 May, EARLIEST record. E. creusa, plentiful, Meadow L Park, 15 May, feeding at blossoms of lyre-leaved rock cress. Charidryas palla, plentiful, Roche Percee, 11 Sept, apparently third brood; seen, same place, 26 Sept, LATE. Oeneis chryxus caryi, Meadow L Park, 15 May, EARLIEST record.

MANITOBA. After an unusually early, dry spring, the summer was quite normal, with a wet spell in August followed by a long, warm, dry autumn. Most species were on the wing unusually early, 25 earliest-ever dates being broken. Most flights ended early in the season. No migrations were noted. Provincial Coordinator: PK (all records unless otherwise noted). Contributors: FWP, JDP.

BUTTERFLIES: Most skippers were down in numbers. Pyrgus communis, small numbers, Culross, 26 Aug-15 Sept, normally uncommon in Manitoba. Oarisma powesheik, uncommon, Tolstoi, 23 June. O. garita, Culross (new locality), 22 June. Thymelicus lineola, Culross (new locality), 1 July. Hesperia leonardus, scarce as in 1986. H. pawnee, uncommon, Melbourne, 8 Aug. H. dacotae, locally common, Inwood (new locality), 29 June. Polites mystic, 12.5 mi E of McCreary, 30 June-2 July 1986 and 10 mi NE of McCreary, 2 July 1986 (FWP, JDP). Papilio polyxenes, locally common in southeast, 23-29 June. No P. kahli or P. machaon observed in southwestern Manitoba. Artogeia napi, uncommon. A. rapae, extremely abundant in agricultural areas, Aug. Euchloe ausonides, small numbers, Sandilands PF, 12 May-9 June. Colias alexandra, Riding Mt NP, 3 July and Grand Rapids, 14 July. C. gigantea, locally common along roads between Ponton, Thompson, and Gillam, 8-13 July. C. palaeno, locally common along roads between Thompson and Gillam, 9-13 July. Epidemia dorcas, Elm Creek and Tolstoi, 14-24 July and at Gillam, 8-14 July. All Incisalia uncommon. Strymon melinus, rare in Manitoba, coll, Whiteshell PP, 13 Aug. Agriades franklinii, fresh female coll, Riding Mt NP, 19 Aug, much later than previously recorded. Euptoieta claudia, abundant near flax fields, 20 Aug-15 Sept. Speyeria idalia, freshly emerged female coll, Culross, 5 July, strongly suggests breeding in Manitoba. Vanessa virginiensis, none. V. cardui, scarce. V. atalanta, common, late July-early Aug. Coenonympha inornata, coll, Gillam, NORTH, 11-12 July. Cercyonis pegala, very abundant in S Manitoba in July. All Erebia, scarce in S Manitoba. Oeneis macounii, common, Cowan, 30 May. O. jutta, a few, Sandilands PP, 15-16 June and at Gillam, 12 July. Danaus plexippus, first seen 1 June, common in late June and again in late July, last seen 20 Aug.

CORRIGENDUM: In the 1986 Season Summary, Manitoba (NEWS Lep Soc, Mar/Apr 1987, 2:27)---delete Hesperia sassacus.

NORTH DAKOTA. The first part of the season was at least three weeks early, with several June species on the wing early in May. Rainfall was well above normal throughout mid-summer. Two state records were taken: Agriades franklinii in Burke Co in the northwest, and ssp hanhami of Charidryas harrisii, in McHenry Co in the north-central part of the state. More than 100 new county records were tallied in what was an extremely good year for several species. Knowledge of the range of Hesperia dacotae was expanded to include two badlands counties, Dunn and McKenzie, raising the state tally to sixteen known populations in ten counties and extending the known North Dakota range for the first time to include prairies west of the Missouri River. State Coordinator and writer of this report: RAR. Contributors: JO, AR, JRO (all RAR unless otherwise indicated).

BUTTERFLIES: Epargyreus clarus, abundant in BARNES, McHENRY, and Dunn Cos, throughout June. Thorybes pylades, abundant, fresh McHENRY Co, 16 May. Erynnis icelus, common, McHENRY Co, 11 and 16 May. E. juvenalis, common, McHENRY Co, 11 & 16 May. E. afraanius, McKenzie Co, 10 May; BURKE Co, 24 May; very fresh, Slope Co, 4 July. Pyrgus communis,

one male, McHENRY Co, 22 July; 2 males, Dunn Co, 31 May; abundant, Slope Co, 1 and 2 Aug. Pholisora catullus, McHENRY Co, 10 May and 12 July; one male, McKenzie Co, 27 June. Carterocephalus palaemon, locally common, Bottineau Co, 7 June. Ancyloxypha numitor, common, Richland Co, 21 June; Ward Co, 26 June. Oarisma powesheik, abundant, Cass and Richland Cos, 21-22 June. O. garita, common, Ward, DUNN, and McHENRY Cos, emerging late May. Hesperia ottoe, fairly common, McKenzie and DUNN Cos, 27 June; common, Ward Co, 29 June; Slope Co, 4 July. H. pahaska, one worn male nectaring on coneflower, McKenzie Co, 27 June; not uncommon, Slope Co, 21 June (JO). H. dacotae, locally abundant, DUNN Co, SOUTHWEST, 14 June; common, McKenzie Co, WEST, 27 June; the Dunn Co locale borders secure state wildlife management land; the McKenzie Co locale borders Ft Berthold Indian Reservation, and is of uncertain destiny; both locales appear to be larger than any previously reported for the state. Polites coras, uncommon but widespread; Ransom Co, 21 June; Ward Co, 26 June; DUNN and McKenzie Cos, 27 June; McHENRY Co, 12 July. P. themistocles, Dunn Co, 14 June; not uncommon, Ransom and Cass Cos, 21 June; Ward Co, 26 June; McKenzie Co, 27 June. P. origenes, abundant, Ward Co, mid-June to July; also DUNN and McKenzie Cos, 27 June; BILLINGS Co, 5 July. P. mystic, abundant, Ward Co, June and early July. Wallengrenia egeremet, locally common, BARNES Co, NORTHWEST, 21 June. Atrytone logan, very common statewide, June & July. Poanes massasoit, locally common, Mirror Pool GMA, Ransom Co, 21 June. P. hobomok, abundant, McHENRY Co, DUNN Co (SOUTHWEST), Bottineau and Ward Cos, throughout May and early June. P. viator, just emerging, Ransom Co, 21 June. Euphyes ruricola, one male, J Clark Salyer NWR, 24 June; abundant, Denhigh Experimental Forest, 8 July, all McHENRY Co; common, Ward Co, early July; also ROLETTE Co, 13 July. Atrytonopsis hianna, not uncommon, Ward Co, 15 May; one fresh female, McHENRY Co, NORTH, 16 May. Amblyscirtes osleri, one female, MOUNTAIN Co, NORTH, 1 June. A. vialis, generally not common, McKenzie Co, 10 May; McHENRY Co, 13 May; DUNN Co, 30 May; one female, Ward Co, 5 June. Papilio kahli, common, McHENRY Co, SOUTH, 8 and 12 July; two males, Bottineau Co, 13 July. P. bairdii, common, McKenzie Co, 10 May; second brood very early, first seen DUNN Co, 14 June. Pterourus glaucus canadensis, common, McHENRY Co, 13 May and 7 June; abundant on dogbane, Dunn Co, 30 May; two seen, Ward Co and BURKE Co, NORTHWEST, 24 May; seen, Ward Co, 7 June; Bottineau Co, 7 June. Pontia protodice, intermediate with P. occidentalis, common, ROLETTE Co, 12 July; Ward Co, 14 June. P. occidentalis, two males, Killdeer Mts, Dunn Co, 14 June. Euchloe olympia, relatively uncommon in badlands after a previous year of abundance; Billings Co, 25 Apr; Slope Co, 25 Apr; McKenzie Co, 9 and 10 May. Gaeides xanthoides, uncommon, Slope Co, 4 July. Hylolycaena hyllus, common, Ward Co, 14 June; one male, RANSOM Co, 22 June. Epidemia helloides, one male, BURKE Co, 29 May; abundant, DUNN Co, 31 May; abundant, Ward Co, 14 June. Harknessia titus, one male, BARNES Co, 21 June; very common, McHENRY Co, 24 June; one male, McKenzie Co, 27 June (AR); uncommon, ROLETTE Co, 13 July. Satyrus acadica, uncommon but fresh, Ward Co, 26 June (AR); worn, but not uncommon, Slope Co, 4 July. S. edwardsii, abundant, Barnes Co, 21-22 June; common but already worn, McHENRY Co, 24 June; common, Rolette Co, 13 July. S. calanus, uncommon, McHENRY Co, 24 June; one male and 3 females, all worn, McKenzie Co, WEST, 27 June. S. liparops, one very worn male, Barnes Co, 21 June; not uncommon, Slope Co, 4 July. Mitoura siva, very fresh, McKenzie Co, 9-10 May. Strymon melinus, two males, McKenzie Co, 10 May; fairly common, DUNN Co, 14 and 27 June; one female, Slope Co, 4 July (AR) and 1-2 Aug. Everes comyntas, one female, McHENRY Co, NORTHWEST, 13 May. E. amyntula, Ward Co, 24 May; one very worn, McHENRY Co, 7 June; Bottineau Co, 7 June; several, BURKE Co, 13 June. Celastrina argiolus, weak spring flight but abundant summer brood; one male, Dunn Co, 24 Apr; abundant, Ward Co, 5 June; also BURKE Co, 13 June; BARNES Co, 21 June; McHENRY Co, 17 and 24 June. Glaucopsyche lygdamus, emerging, Billings Co, 25 Apr; common, McKenzie Co, 10 May; common, Ward Co, 24 May; abundant, BURKE Co, 29 May; abundant, Dunn Co, 30 May; common, Bottineau Co, 7 June. Lycaeides melissa, one male, BURKE Co, 29 May; fresh, common, McHENRY Co, 22 July. Plebejus saepiolus, common, BURKE Co, 24 & 29 May and 13 June; three males, DUNN Co, 31 May; Bottineau Co, 7 June. Icaricia acmon, one male, McKenzie Co, 10 May; common and very fresh, Slope Co, 4 July; worn but still common, Slope Co, 1-2 Aug. Agriades franklinii, three males and one female, 24 May and two males, 29 May, flying in well grazed pasture, BURKE Co, STATE. Euptoieta claudia, uncommon statewide early; very common, Ward Co, Sept. Speyeria cybele, common, Ward, Dunn, Slope, McKenzie, Billings Cos, mid-June onward. S. aphrodite, common, Ward, Dunn, Slope, McKenzie, Billings Cos, mid-June onward; also McHENRY Co, 8 July. S. idalia, one seen, Ransom Co, 21 June. S. edwardsii, fresh, DUNN Co, 14 June and common there by 27 June; Slope Co, 4 July. S. callippe, abundant on alfalfa, Ward Co, 13 June; common throughout western counties. Clossiana selene, abundant, McHENRY Co, 17 June, worn by 12 July. C. bellona, abundant, Cass and Richland Cos, 20-21 June; not uncommon, ROLETTE Co, 13 July. Charidryas gorgone, common, McKenzie Co, 9-10 May; McHENRY Co, 11 and 13 May; Ward Co, 24 May; BURKE Co, 29 May. C. nycteis, common, BARNES Co, 21-22 June. C. harrisii hanhami, abundant but well flown, McHENRY Co, 17 June, STATE for ssp hanhami. C. acastus, abundant, McKenzie Co, 9-10 May; one male, Slope Co, 4 July (JRo). Phyciodes tharos (including pascoensis), common statewide until early Oct; very strong late emergence in Ward Co; also common, ROLETTE Co, 13 July. P. batesii, common, DUNN Co, 31 May; also Ward Co, 5 June. Polygonia interrogationis, common, BILLINGS Co, 5 July. P. comma, abundant, BARNES Co, 20-21 June; WARD Co, 26 June. P. progne, BARNES Co, 20-21 June; BILLINGS Co, 5 July. Nymphalis antiopa, very good year statewide; Dunn Co, 24 Apr; McKenzie Co, 10 May and 27 June; Ward Co, 5 and 26 June; BARNES Co, 20-21 June; Slope Co, 4 July; BILLINGS Co, 5 July; McHENRY Co, 12 July. Vanessa virginiensis, one worn male, BARNES Co, 21 June. V. cardui, generally uncommon all season; a few, BURKE Co, 29 May. V. atalanta, common, Barnes Co, 20 June; Ward Co, late June onward; generally a very good year statewide. Basilarchia arthemis, one banded intergrade with B. a. astyanax, RANSOM Co, 21 June; near ssp rubrofasciata, common, BURKE Co, 13 June; very common, McHENRY Co, 24 June; common, Ward Co, 5 June through most of July. B. archippus, abundant, McHENRY Co, 17 June and 8 July; Ward Co, 26 June. B. weidemeyerii oberfoellii, good but early year throughout badlands from late May, worn by early July. Enodia anthedon, just emerging, Barnes Co, 20-21 June; one male, ROLETTE Co, 13 July. Satyrodes eurydice, uncommon throughout northwestern counties after a good year in 1986. Megisto cymela, common, Barnes Co, 20-21 June; common, Ward Co, 5 June; worn but common, McHENRY Co, 7 and 24 June. Coenonympha inornata, less common than 1986, appearing McHENRY Co, 15 May; Ward Co, 24 May and 5 and 14 June, when fairly common; BURKE Co, 29 May; Bottineau Co, 7 June. Cercyonis pegala, common, Ward and McHENRY Cos, throughout July; McHENRY Co, 8 July and abundant by 12 July; still flying, Slope Co, 2 Aug. C. meadii, common, Slope Co, 2 Aug. C. oetus, one female, Slope Co, 4 July. Oeneis uhleri varuna, early, not as common as 1986; one pair, McKenzie Co, 10 May; fairly common, McHENRY Co, 11, 13 and 16 May; Ward Co, 15 May; uncommon, BURKE Co, 24 May. Danaus plexippus, not at all common in western counties.

SOUTH DAKOTA. The season was very early, at least in the western part of the state, with the first hibernating adults of Nymphalis antiopa, Aglais milberti, and Polygonia interrogationis being found 6-7 Mar (RCR, DJR). About 52 new county butterfly records were tallied, most of which, except for the common and widespread species, are listed below. Euphyes dion was collected for the first time in South Dakota. Contributors: JB, GMM, DJR, RCR, RES, WDW.

BUTTERFLIES: Hesperia ottoe, Miller L, CORSON Co, 23 June (GMM). H. dacotae, several new sites, Deuel Co, 3-4 July (GMM). Polites coras, Miller L, CORSON Co, 23 June (GMM). Atrytone logan, Miller L, CORSON Co, 23 June (GMM); nr Meadow, PERKINS Co, 24 June (GMM); Rt 34 at Cheyenne R, ZIEBACH Co, 23 June (GMM). Euphyes dion, several males coll in bog, DEUEL Co, 6 July, STATE (GMM). Megathymus texanus, Rt 34 at Cheyenne R, ZIEBACH Co, 23 June (GMM). Papilio polyxenes, CUSTER Co, 5 July 1974 (FS), spec in CSC coll. P. bairdii, Rt 34 at Cheyenne R, ZIEBACH Co, 23 June (GMM).

P. zelicaon, Center of Nation RA, BUTTE Co, 25 June (GMM); Terry Peak, Lawrence Co, 7 July (WDW,JB). Pontia occidentalis, Miller L, CORSON Co, 23 June and Rt 34 at Cheyenne R, ZIEBACH Co, 23 June (GMM); Terry Peak, Lawrence Co, 7 July (WDW,JB). Gaeides xanthoides, Miller L, CORSON Co, 23 June (GMM). Hyllolycaena hyllus, Miller L, CORSON Co, and Durkee L, MEADE Co, 23 June (GMM). Chalceria rubidus, nr Short Pines, HARDING Co, 25 June (GMM). Harkenclenus titus, DEUEL Co, 3 July (GMM). Mitoura siva, Rt 34 at Cheyenne R, ZIEBACH Co, 24 May (GMM,RES). Strymon melinus, Rt 34 at Cheyenne R, ZIEBACH Co, 25 June and Center of Nation RA, BUTTE Co, 25 June (GMM). Icaricia shasta, 1 mi N of Tillson Creek, LAWRENCE Co, 25 June (GMM). Speyeria cybele, Miller L, CORSON Co, 23 June and nr Meadow, PERKINS Co, 24 June (GMM). S. aphrodite, Rt 34 at Cheyenne R, ZIEBACH Co, 23 June and nr Meadow, PERKINS Co, 24 June (GMM). S. idalia, Miller L, CORSON Co, and Rt 34 at Cheyenne R, ZIEBACH Co, 23 June (GMM). S. edwardsii, abundant on prairies E of Ardmore, Fall River Co, nectaring on alfalfa and sweet clover at 0700 hrs, 35 coll in 1/2 hr (RCR,DJR). S. callippe, Rt 34 at Cheyenne R, ZIEBACH Co, 23 June and nr Meadow, PERKINS Co, 24 June (GMM); Terry Peak, Lawrence Co, 7 July (WDW,JB). Charidryas gorgone, 20 mi W of Cherry Creek, ZIEBACH Co, 24 May (RES); Miller L, CORSON Co, 23 June (GMM). Nymphalis vau-album, one very worn, Rochford, Pennington Co, 7 June and one fresh, Mystic, Pennington Co, 19 July (RCR, DJR). Aglais milberti, nr Meadow, PERKINS Co, 24 June (GMM). Basilarchia weidemeyerii, nr Meadow, PERKINS Co, 24 June (GMM). Satyrodes eurydice, Miller L, CORSON Co, 23 June (GMM). Megisto cymela, Miller L, CORSON Co, 23 June (GMM). Coenonympha inornata, 20 mi W of Cherry Creek, ZIEBACH Co, 24 May (GMM,RES); nr Meadow, CORSON Co, 25 May (GMM). Cercyonis meadii, fresh, nr Mystic, Pennington Co, 19 July (RCR).

MOths: **SESIIDAE** - Synanthedon pictipes, Pactola Res, Pennington Co and Terry Peak, Lawrence Co, 7 July, WEST (WDW), moths attracted to 10-day-old peach borer pheromone which observer habitually wears pinned to his shirt! **NOCTUIDAE** - Alypia langtoni, Terry Peak, Lawrence Co, 7 July (WDW,JB).

NEBRASKA. It was one of the earliest seasons throughout the state in many years. Early moths first appeared in the west on 12 Feb (RCR) and on the same date a very early Vanessa sp butterfly was observed in the east (BP). Many of the hibernating butterfly species were first active on 7 March in many areas that experienced record-breaking temperatures. Most moth species were so early in the west, that by the time September and early October came, there was little to find because most late species were out in August! About 44 observers contributed 530 new county butterfly records, only the more noteworthy of which follow. Three new state butterfly records - Polites sabuleti, Megathymus coloradensis, and Euphilotes rita - are detailed below. Additionally, verified specimens of Pterourus rutulus and Boloria titania helena added these species to the state list. One butterfly, Colias eurytheme, is now known from all 93 Nebraska counties, the first in this category. We are just beginning to piece together the distribution of many of the "common" moth species in the state; hence, many citations below that appear to be significant in 1987, many prove to be very insignificant when data from future years is compiled. Save for the larger and more showy species, relatively little is known about Nebraska moths at this time. Special thanks is due to all contributors cited below; as usual, Neil Dankert deserves accolades for his assistance way beyond the mere call of "duty". State Coordinator: NED. Contributors: TB, JB, MB, EAF, RDG, RH, DHe, TEH, DJ, LK, RK, HRL, TL, DRL, SL, LM, HGN, BWN, CO, PAO, BP, LP, LR, BR, JRe, GR, DJR, RCR, CR, JAS, FS, SMS, MS, DT, NT, MT, CT, EV, JW, BLW, WDW, VLW, VLWr.

BUTTERFLIES: Thorybes bathyllus, Steele City Cyn, JEFFERSON Co, 29 Aug (NED,SMS). Staphylus hayhurstii, coll, nr Marquette, HAMILTON Co, 30 May (BWN); coll, nr North Platte, LINCOLN Co, WEST, 2 June (TL). Erynnis horatius, Steele City Cyn, JEFFERSON Co, 29 Aug (NED,SMS). E. martialis, photo, Indian Cave SP, RICHARDSON Co, 29 June (BP,TB,BLW), ver by Paul A. Opler. E. afranius, 6 coll and 6 seen, nr Redington, MORRILL Co, 4 July (RCR,DJR). Pyrgus communis, seen, DeSoto MNR, WASHINGTON Co, 6 Nov, LATE (BP,LP). Ancyloxypha numitor, max 20 coll and seen, Parks area, DUNDY Co, 2 Aug (RCR). Hylephila phyleus, photo, Omaha, Douglas Co, 11 July, earliest (JW); nr Fairfield, CLAY Co, WEST, 7 Sept (NED); max 8 seen, Schramm Park SRA, Sarpy Co, 26 Sept (TB). Yvretta rhesus, 1 worn, coll, 5 mi E of Bayard, Morrill Co, 6 June (RCR,DJR). Hesperia uncas, coll, 2 mi E of Potter, CHEYENNE Co, 26 July (PAO,CO). H. ottoes, coll, 1 mi N of Bushnell, KIMBALL Co, 26 July (PAO,CO); male coll, Bridgeport, MORRILL Co, 31 July (RCR); male coll, nr North Platte, LINCOLN Co, 5 July (TL); 2 coll, 8 mi N of Trenton, HITCHCOCK Co, 1 Aug (RCR); coll, DAWSON Co, 17 June (JAS); female coll, nr Farwell, HOWARD Co, 9 Aug (NED). H. leonardus, male coll, nr North Platte, LINCOLN Co, 17 Aug (TL); 6 coll and 1 seen, 2 mi W of Duning, BLAINE Co, 5 Sept (RCR,DJR); 1 coll, nr Ft Hartsuff, VALLEY Co, 6 Sept (RCR,DJR); 3 coll and 2 seen, nr Ashton, SHERMAN Co, 6 Sept (NED). Polites coras, max 36 coll and seen in small meadow, 2 mi W of Duning, BLAINE Co, 5 Sept (RCR). P. sabuleti, 1 male and 2 females coll on Chrysothamnus sp, Mitchell, SCOTTSBLUFF Co, 12 Sept, STATE (spec in RCR coll, ver Clifford D. Ferris). Wallengrenia egeremet, coll, 5 mi SW of Hubbard, DAKOTA Co, 27 June (JAS); photo, Indian Cave SP, RICHARDSON Co, 29 June (BLW), ver Paul A. Opler; 9 males and 2 females coll, Keller SRA, 10 July and 2 males and 2 females coll, Niobrara Valley Pres, both Brown Co, 11 July (NED). Atalopedes campestris, common and widespread from late July to early Oct; max 35, Schramm Park SRA, Sarpy Co, 26 Sept (TB). Poanes hobomok, 1 coll, Harry Strunk L, FRONTIER Co, 13 June (NED). P. taxiles, coll and seen, Niobrara Valley Pres, Brown Co, 11 July (NED); third consecutive year for this easternmost population; 6 coll and seen, nr Hay Springs, Sheridan Co, 22 July (RCR,DJR). Atrytonopsis hianna, 1 coll, nr Gothenburg, DAWSON Co, 7 May (NED). Amblyscirtes vialis, singles coll and seen in widespread localities, 2 May-6 Sept, indicating a multi-brooded condition in Nebraska. Lerodea eufala, coll and seen, Steele City Cyn, JEFFERSON Co, 29 Aug (NED,SMS); 2 coll and 1 seen, nr Bostwick, NUCKOLLS Co, 7 Sept (NED). Megathymus coloradensis, coll, 6 mi S of Gothenburg, DAWSON Co, STATE, 1986 (JRe); males coll, same locality, 25 Apr and 2 May (NED, JRe). All swallowtails were more common and widespread throughout than in the average year. Papilio polyxenes, seen, Bellevue, Sarpy Co, 17 Mar, EARLY (BP,LP). P. bairdii, more common and widespread than known previously in SW Nebraska from GOSPER (NED) and HARLAN Cos (DRL) NW to LINCOLN (TL) and CHEYENNE Cos (PAO,CO). 25 Apr-2 Aug; individuals were seen and coll in 7 new counties; max included 54 seen and coll, 2 May, and 32 seen and coll, 7 May, all 6 mi S of Gothenburg, Dawson Co (JRe,NED) and 31 seen and coll, nr Holbrook, Furnas Co, 21 June (DRL); 4-5 larvae coll, Harry Strunk L, FRONTIER Co, 25 July (NED,DRL); very out of place and time was 1 coll nr Ft Hartsuff, VALLEY Co, EAST, 6 Sept (RCR). Heracles cressphontes, more widespread than usual in the SE, west to Buffalo (NED) and Furnas Cos (DRL), and north to Platte (EAF) and WASHINGTON (TB) Cos; max 6, Schramm Park SRA, Sarpy Co, 21 July (TB); seen, Columbus, Platte Co, 1 Oct (EAF) and Bellevue, Sarpy Co, 8 Oct (BP,LP), LATE. Pterourus glaucus, seen, Bellevue, Sarpy Co, 17 Apr, EARLY (TB) and seen, same place, 8 Oct, LATE (BP,LP); spec in CSC coll from nr Chadron, DAWES Co, 13 Aug 1984 and 10 mi S of Gordon, SHERIDAN Co, 21 Aug 1984 (HRL); this species is now known to follow the Niobrara River system westward across the entire state. P. rutulus, coll, nr Holbrook, FURNAS Co, pre-1962, EAST (DRL); spec in DRL coll, ver Clifford D. Ferris, the first ver spec for the STATE. P. palamedes, spec CSC coll, BROWN Co, NORTHWEST, 8 July 1980 (CR). Neophasia menapia, max 21, seen and coll, Sowbelly Cyn, Sioux Co, 14 July, EARLY (RCR,DJR). Pontia sisymbrii, 4 coll and 2 seen, nr Redington, MORRILL Co, 9 May (RCR,DJR). P. occidentalis, female coll, L Minatare, SCOTTSBLUFF Co, 18 May (RK) and spec CSC coll, Chadron, DAWES Co, 25 Apr 1982 (FS), all ver Clifford D. Ferris. Colias philodice, seen, Omaha, Sarpy Co, 3 Nov, latest (TB). C. eurytheme, melanic female coll, Rowe Sanctuary, Buffalo Co, 13 Aug (NED). DFW dark, except for light spots near the outer margin and some normal coloration on inner margin. VFW with some dark dusting in interior areas, DHW and VHW somewhat darker but near normal; small greenish spec, photo, Omaha, Douglas Co, 24 Nov, LATE (JW). Zerene cesonia, more common and widespread than usual in SW and S Panhandle, with

records from 7 new counties. Phoebis sennae, unusually common and widespread in SE, west to SALINE (NED) and JEFFERSON (VLW, VLW, NED, SMS). Cos and north to BURT Co (JW), with records from 8 new counties, 29 June-3 Nov; max include 135 on Fontenelle Forest Xerces Count, Bellevue, Sarpy Co (GR), 8-9 Aug & 104 on Neale Woods Xerces Count, Douglas Co, 25 July (EV) plus 43, Two Rivers SRA, Douglas Co, 30 July (TB) and 28, Schramm Park SRA, Sarpy Co, 8 Sep (TB); away from the SE were 2 additional records, 2 coll near Burwell, GARFIELD Co, 9 July, and coll nr Loup City, SHERMAN Co, 10 Aug (LK). P. agarithe, 1 coll, nr Holbrook, FURNAS Co, WEST, 2 Sept (DRL). Eurema mexicana, surprisingly scarce, 6 records from 5 new counties, mostly in the SW and S Panhandle. Pyrastis lisa, not uncommon in SE, 29 June-22 Oct, west to NUCKOLLS Co (NED) & north to BURT Co (HGN); 1 coll, Niobrara Valley Pres, BROWN Co, NORTHWEST (NED); max 73, Neale Woods Xerces Count, Douglas Co (EV), 25 July; 23, Indian Cave SP Xerces Count, Richardson Co, 29 June (TB); and 20-25, Steele City Cyn, JEFFERSON Co, 29 Aug (NED, SMS). Abaeis nicippe, seen, Indian Cave SP, RICHARDSON Co, 29 June (BLW, TB, BP); coll, 1 mi N of Bushnell, KIMBALL Co, 26 July (PAO, CO); several, 2 mi E of Potter, CHEYENNE Co, 26 July (PAO, CO); photo, Douglas Co, 9 Aug (JW). Nathalis iole, common and widespread except for NW with new records from 16 counties. Feniseca tarquinius, photo, Bellevue, Sarpy Co, 13 June (BP, LP); max 3, Neale Woods Xerces Count, Douglas Co, 25 July (EV). Lycaena phlaeas, 1 coll, Steele City Cyn, JEFFERSON Co, 29 Aug (SMS). Epidemia helloides, coll, nr Holbrook, FURNAS Co, 2 Oct (DRL). Harkencienus titus, 3 coll and seen, nr Franklin, FRANKLIN Co, 3 July (NED); seen, Hover Prairie, SARPY Co, 10 July (JW). Satyrus acadica, 2 coll, S of Stanton and S of Pilger, STANTON Co, 27 June (JAS); coll, 2 mi E of Potter, CHEYENNE Co, 26 July (PAO, CO). S. calanus, seen, Hover Prairie, Sarpy Co, 13 & 15 June (TB); photo, Platte River SP, CASS Co, 24 June (TB). S. liparops, photo, Stolley Prairie, DOUGLAS Co, 20 June (TB). Mitoura siva, 14 coll and seen, 2 May, plus 24 coll and seen, 7 May, all 6 mi S of Gothenburg, DAWSON Co, SOUTHEAST (NED, JRE). M. gryneus, spreading rapidly in SE; coll, Holbrook area, FURNAS Co, WEST, 3 May (DRL); max 17, Hord L, HAMILTON Co, 26 June (TB, BP); and 10, Indian Cave SP, RICHARDSON Co, 29 June (TB, BP, BLW). Leptotes marina, very scarce with only two records; coll, nr Holbrook, Furnas Co, 15 Aug (DRL) and Steele City Cyn, JEFFERSON Co (SMS). Hemiargus isola, more common and widespread than in most years, N to MORRILL (DJR, RCR), LOUP (RCR, DJR) and WASHINGTON (JW) Cos; max 14 coll and seen, Harry Strunk L, FRONTIER Co, 13 June (NED, HGN, DRL), and 31, Neale Woods Xerces Count, Douglas Co, 25 July (EV). Everes comyntas, max 33, Indian Cave SP, Richardson Co, 29 June (TB, BP, BLW); 46, Fontenelle Forest Xerces Count, Sarpy Co, 8-9 Aug (GR); and 24, Branched Oak L, Lancaster Co, 9 Aug (TB). Celastrina argiolus, Bellevue, Sarpy Co, 9 Apr, earliest (BP, LP); form neglecta, coll, nr Sutherland, LINCOLN Co, 28 June (JAS). Euphilotes rita, 4 males coll, 1 mi N of Bushnell, KIMBALL Co, 26 July, STATE (PAO, CO), spec in RCR coll. Glaucopsyche lygdamus, 1 coll and 1 seen, Jeffrey Res, LINCOLN Co, SOUTHEAST, 17 Apr (NED, TL); 21 seen and coll, 25 Apr; 46 seen and coll, 2 May; 36 seen, 7 May; all 6 mi S of Gothenburg, Dawson Co, SOUTHEAST (NED, JRE). Icaricia shasta, 1 coll, nr Redington, MORRILL Co, 31 May (RCR); spec from CSC coll, male, 12 June 1979, and female, 3 July 1979, both 22 mi S of Chadron, DAWES Co (HRL). Plebejus acmon, male coll, nr Hildreth, FRANKLIN Co, 3 July (NED). Libytheana bachmanii, of five records, four are from the W; coll, nr Dix, KIMBALL Co, and 2 coll, 2 mi E of Potter, CHEYENNE Co, 26 July (PAO, CO); 1 coll, nr Holbrook, Furnas Co, 26 July (DRL); 1 coll, 2.5 mi E of Max, DUNDY Co, 1 Aug (RCR). Agraulis vanillae, appeared 10-12 days earlier than usual on passion vine, Columbus, Platte Co, where of those reared, the first brood emerged 4-8 Aug and the second brood 26 Aug and 4 Sept (EAF); a worn male coll, 2 mi E of Potter, CHEYENNE Co, 26 July (PAO, CO); 1 seen, nr Holbrook, Furnas Co, 2 Aug (DRL). Speyeria idalia, the best year since 1984, widespread with 10 new county records; max 27 on 20 June (TB), 65 on 28 June (BP, LP), and 23 on 3 July (TB), all Stolley Prairie, Douglas Co; 82, Hord L, HAMILTON Co, 26 June (TB, BP); and 87, Rowe Sanctuary Xerces Count, Buffalo Co, 4 July (HGN). S. edwardsii, abundant in NW, first appearing in late May; max 182 on Sioux Co Canyons Xerces Count, 14 July (RCR, DJR). S. mormonia, 2 spec in CSC coll, SE of Crawford, DAWES Co, 16 Aug 1984 (FS), ver Clifford D. Ferris, second modern records for state. Clossiana selene, coll, nr Chapman, MERRICK Co, 9 May (MS); coll, S of Stanton and S of Pilger, STANTON Co, 27 June (JAS); 7 coll and seen, 2 mi W of Duning, BLAINE Co, 5 Sept, and 1 coll, nr Ft Hartsuff, VALLEY Co, 6 Sept (RCR, DJR). C. titania helena, spec in CSC coll, SE of Crawford, DAWES Co, STATE, 16 Aug 1984 (MB), ver Clifford D. Ferris. Thessalia fulvia, 1 coll on 25 Apr, 25 coll and seen on 2 May, 27 seen and coll on 7 May, and 18 coll and seen on 13 June, all 6 mi S of Gothenburg, Dawson Co (NED, JRE); female coll, 1 mi E of Sutherland, LINCOLN Co, 17 June (JAS). Charidryas gorgone, max, 26 seen and coll, 9 mi N of Hayes Center, HAYES Co, 1 Aug (RCR). Phyciodes texana, coll, nr Holbrook, FURNAS Co, 19 July (DRL); coll, North Platte, LINCOLN Co, 10 Aug (TL). P. picta, coll, nr Holbrook, FURNAS Co, EAST, pre-1962 (DRL). Polygonia comma, more common and widespread than usual; max 18, Bellevue, Sarpy Co, 13 July (TB). Nymphalis antiopa, seen, Omaha, Douglas Co, 7 Mar, earliest (JW). Aglaia milberti, more common earlier in the season than usual; seen, L McConaughy, KEITH Co, 18 Apr (RCR, DJR); coll, nr Stratton, HITCHCOCK Co, 31 May (TEH); seen, Clear Creek WMA, GARDEN Co, 13 June (RCR, DJR); coll, 1 mi N of Bushnell, KIMBALL Co, 26 July (PAO, CO). Vanessa virginiensis, numbers very low compared with 1986. V. cardui, generally scarce. Junonia coenia, more common and widespread than in most years; max, 14 on Neale Woods Xerces Count, Douglas Co, 25 July (EV); 5, Two Rivers SRA, Douglas Co, 30 July (TB); and 8-12 seen, Steele City Cyn, Jefferson Co, 29 Aug (NED, SMS). Basilarchia arthemis astyanax, coll, nr North Platte, LINCOLN Co, WEST, 16 Aug (TL). Anaea andria, singles reported from 7 counties which is more than in most years. Asterocampa celis, max 222 on Fontenelle Forest Xerces Count, Sarpy Co, 8-9 Aug (GR) and 90, Neale Woods Xerces Count, Douglas Co, 25 July (EV); unusually common, Chadron, Dawes Co, 28 July-5 Aug, where they came to blacklight at night and drowned regularly in a garden birdbath! (RCR). Enodia anthedon, max 10 coll and seen, Niobrara Valley Pres, KEYA PAHA Co, 11 July (NED). Megisto cymela, more abundant than during average year; early in late May in SE (NED); max 27, Platte River SP, Cass Co, 24 June (TB), and 28, Indian Cave SP, 29 June (TB, BP, BLW). Cercyonis pegala, max 453, Sioux County Canyons Xerces Count, 14 July (RCR, DJR). Oeneis uhleri, the best flight in ten years, Sioux Co canyons, 15-25 May (RCR, DJR). Danaus plexippus, fair numbers in extreme E in mid-summer but all agreed that fall migrants were down in abundance compared with many years, the max being 125 migrating over Omaha, Douglas Co, 25 Sept (BP, LP). D. gilippus, worn male coll, 2 mi E of Potter, CHEYENNE Co, 26 July (PAO, CO); 2 coll, nr Holbrook, Furnas Co, 26 July (DRL).

MOTHS: INCURVARIIDAE - Tegeticula yuccasella, 3 at mercury vapor lights, 12 mi S of Chadron, Dawes Co, 18 June (RCR). YPONOMEUTIDAE - Atteva punctella, coll, Kearney, Buffalo Co, 10-11 and 18-19 May (NED); Bellevue, Sarpy Co, 8 Aug (TB) and 16 Aug (BP, LP). LIMACODIDAE - Apoda y-inversum and Euclea delphinii, photos, Indian Cave SP, Richardson Co, 29 June (TB). PYRALIDAE - Ostrinia nubilalis, coll, Kearney, Buffalo Co, 18-19 and 29-30 May (NED). Achyra rantalis, coll, Kearney, Buffalo Co, 18-19 May (NED). Pyrausta bicoloralis, Bellevue, Sarpy Co, 12 Aug (TB). P. subsequalis, seen, Bellevue, Sarpy Co, 5 July (JW). Nomophila nearctica, fairly common, Kearney, Buffalo Co, 22 Apr-30 May, max 28 on 29-30 Apr (NED). Hypsopygia costalis, at lights, Omaha, Douglas Co, 29 July and 18 Aug (TB); Bellevue, Sarpy Co, 16 Aug (BP, LP); coll, near Loup City, Sherman Co, Sept (LK). GEOMETRIDAE - Exelis pyrolaria, coll, Kearney, Buffalo Co, 25-26 Apr (NED). Tornos scolopacinaris, singles coll, Kearney, Buffalo Co, 23 Apr-1 May (NED). Paleacrita vernata, Chadron, Dawes Co, 11-12 Feb, EARLY (RCR, DJR). Euchlaena irraria, 3 coll, 12 mi S of Chadron, Dawes Co, 16-19 June (RCR). Xanthotype urticaria, photo, Omaha, Douglas Co, 27 July and seen, Bellevue, Sarpy Co, 23 Aug (TB). Pero honestaria, coll, Kearney, Buffalo Co, 29-30 Apr (NED). Probole alienaria, 1 at black light, Bellevue, Sarpy Co, 10 Aug (TB). Prochoerodes transversata, 1-5, Bellevue, Sarpy Co, 8 Aug and 4-13 Sept (BP, LP). Synchlora aerata, at lights, Omaha, Douglas Co, 29 July (TB); Bellevue, Sarpy Co, 5 Aug (BP, LP). Haematopsis grataria, reported fairly commonly from Douglas, Sarpy, Loup, Garfield, and Valley Cos in the E and Garden Co in the W (TB, BP, LP, JW, RCR, DJR). Scopula

limboundata, Omaha, Douglas Co, 27 July and Bellevue, Sarpy Co, 8-12 Aug (TB). *S. inductata*, coll. Kearney, Buffalo Co, 29-30 May (NED). *Orthonama obstipata*, male coll. Kearney, Buffalo Co, 10-11 May (NED). LASICAMPIDAE - *Tolyte distincta*, uncommon, 12 mi S of Chadron, Dawes Co, 21 July-31 Aug, Max 8 on 26 Aug (RCR). *Phyllodesma americana*, coll. Kearney, Buffalo Co, 17-18 and 27-28 Apr (NED). *Gloveria arizonensis*, the peak year of the last five for this SW species, 12 mi S of Chadron, Dawes Co, 29 June-17 July; max 16 on 29 June and 22 on 2 July; all females, the only male ever seen at this location was one coll 30 June (RCR). *Malacosoma californicum*, 1 coll, 12 mi S of Chadron, Dawes Co, 18 June (RCR). SATURNIIDAE - *Sphingicampa bicolor*, coll. Kearney, Buffalo Co, 18-19 May and 6 & 28 July (NED); coll. Rockville, Sherman Co, 8 July (DT); at black light, Bellevue, Sarpy Co, 4 Sept (TB,BP,LP). *Coloradia pandora*, the poorest year in the last five, 12 mi S of Chadron, Dawes Co, 20 July (EARLY)--20 Aug; max only 126 on 31 July, usually 400-500 in a one-night max (RCR). *Hemileuca nevadensis*, nr Benkelman, Dundy Co, 7 Oct (TEH). *Actias luna*, fresh, Bellevue, Sarpy Co, 26 Apr (JW). *Hyalophora cecropia*, pair coll. Aurora, Hamilton Co, 20 May (MS); female coll. nr Chambers, Holt Co, 7 June (LM). SPHINGIDAE - *Manduca sexta*, coll. nr Loup City, Sherman Co, 16 June (LK); Rockville, Sherman Co, 14 Aug (DT); Millard, Douglas Co, 17 Aug (TB). *M. quinquemaculata*, coll. Aurora, Hamilton Co, 2 Aug (MS). *Ceratomia amyntor*, 4 coll. Kearney, Buffalo Co, 29 May and 15 June (NED). *C. undulosa*, seen, 12 mi S of Chadron, Dawes Co, 19 May, EARLY (RCR); coll. nr Loup City, Sherman Co, 26 May (LK). *Sphinx vashti*, coll. nr Loup City, Sherman Co, 26 May (LK). *S. drupiferarum*, nr Loup City, Sherman Co, 26 June (LK). *Smerinthus jamaicensis*, coll. nr Loup City, Sherman Co, 27 June (LK). *Paonias excaecatus*, coll. Kearney, Buffalo Co, 29 June (NED); Rockville, Sherman Co, 8 July (DT). *P. myops*, coll. nr Loup City, Sherman Co, 29 May (LK). *Pachysphinx modesta*, coll. nr Chambers, Holt Co, 6 June (LM); coll. nr Loup City, Sherman Co, 25 June (LK). *Darapsa myron*, coll. Kearney, Buffalo Co, 18 May (NED). *Hyles lineata*, very small numbers throughout. NOTODONTIDAE - *Pheosia rimosa*, Rockville, Sherman Co, 27 June (DT); coll. 12 mi S of Chadron, Dawes Co, 23 July (RCR). *Odontesia elegans*, coll. Kearney, Buffalo Co, 26 May (NED). ARCTIIDAE - *Hypoprepia fucosa*, Indian Cave SP, Richardson Co, 29 June (TB). *Haploa reversa*, very common, photo, Hover Prairie, Sarpy Co, 15 June (TB); several hundred, photo, Stolley Prairie, Douglas Co, 20 June (TB); 12 seen, Platte River SP, Cass Co, 24 June (TB). *Holmelina aurantiaca*, coll. Kearney, Buffalo Co, 29-30 May (NED). *Turruptiana permaculata*, 1-4 per night, 12 mi S of Chadron, Dawes Co, 1 June-30 July and 19 Aug (RCR). *Apantesis virgo*, coll. Rockville, Sherman Co, 7 July (DT). *A. arge*, coll. Kearney, Buffalo Co, 30 Apr-1 May and 9-10 May (NED); coll. Rockville, Sherman Co, 29 June (DT). *Halysidota tessellaris*, coll. Rockville, Sherman Co, 22 & 24 June (DT). *Ectypia clio*, singles, 12 mi S of Chadron, Dawes Co, 29 June and 6, 14, & 15 July, the first since 1983 (RCR). *Cisseps fulvicollis*, 12 seen and coll. nr Angora, Morrill Co, 31 July (RCR); very common, Hover Prairie, Sarpy Co, 8 Aug (TB); 1 coll. nr Ft Hartuff, Valley Co, 6 Sept (RCR). NOCTUIDAE - *Idia lubricalis*, 2 at bait, Omaha, Douglas Co, 28 July (TB). *Rivula propingualis*, 1 at lights, Bellevue, Sarpy Co, 10 Aug (TB). *Melipotis indomita*, coll. Kearney, Buffalo Co, 26 May (NED). *Parallela bistriaris*, at bait, Omaha, Douglas Co, 27 July and Bellevue, Sarpy Co, 30 July (TB). *Caenurgina crassiuscula*, coll. Kearney, Buffalo Co, 16-17 Apr (NED). *Argyrostromis anilis*, Hover Prairie, Sarpy Co, 8 Aug (TB,BP,LP). *Spiloloma lunilinea*, at black light, Bellevue, Sarpy Co, 10 Aug (TB). The following *Catocala* coll by RCR in recent years were determined by H. A. Freeman. *Catocala neogama*, female, Chadron, Dawes Co, 8 Aug 1986. *C. parta*, male, Chadron, Dawes Co, 23 July 1984; male, 12 mi S of Chadron, Dawes Co, 9 Aug 1984; female, Chadron, Dawes Co, 3 Sept. *C. luciana*, male, Whitney, Dawes Co, 24 Aug 1983; male on 10 Aug 1986 and female on 13 Aug 1986, both Chadron, Dawes Co. *C. pura*, 2 females on 19 Aug 1983, and a male and a female on 26 Aug 1983, Box Butte Res, Dawes Co; a female, Clear Creek WMA, Keith Co, 26 Oct 1984. *C. meskei*, a female on 19 Aug 1983 and 2 females on 25 Aug 1983, all Box Butte Res, Dawes Co; female, 12 mi S of Chadron, Dawes Co, 2 Aug 1984; female, Chadron, Dawes Co, 28 July. *C. amatrix editha*, female, Box Butte Res, Dawes Co, 25 Aug 1983; female, West Ash Creek Cyn, Dawes Co, 2 Sept 1983; male, Chadron, Dawes Co, 10 Sept 1983; male, 12 mi S of Chadron, Dawes Co, 17 Sept. Other 1987 *Catocala* reports included *C. amatrix*, coll. 1 Aug at Rockville (DT) and 10 Aug nr Loup City, both Sherman Co; at bait, photo, Bellevue, Sarpy Co, 10 Aug (TB,BP,LP). *C. grynea*, coll. North Platte, Lincoln Co, 20 June (TL). *Plusia contexta*, coll. nr Rockville, Sherman Co, 4 Aug (DT). *Synedoida howlandi*, coll. 12 mi S of Chadron, Dawes Co, 31 July (RCR). *Lithocada carneola*, 3 coll. Kearney, Buffalo Co, 6-23 May (NED); Bellevue, Sarpy Co, 5 Aug (BP,LP) and 10 Aug & 4 Sept (TB); at lights, Omaha, Douglas Co, 24 Sept (TB). *Homophoberia apicosa*, coll. Kearney, Buffalo Co, 30 Apr-1 May (NED). *Tarachidia candefacta*, coll. Kearney, Buffalo Co, 6-7 May (NED). *Acontia aprica*, 2 coll. Kearney, Buffalo Co, 17-19 May (NED); photo, Bellevue, Sarpy Co, July (BP,LP). *Acronicta lobeliae*, coll. Kearney, Buffalo Co, 17-18 May (NED). *Simyra henrici*, 8 coll on 16-17 Apr, singles on 17 Apr-11 May, all Kearney, Buffalo Co (NED). *Alypia octomaculata*, nr Indian Cave SP, Nemaha Co, 29 June (TB); Stolley Prairie, Douglas Co, 31 May (JW). *Dypterygia rozmani*, 3 coll. Kearney, Buffalo Co, 9-11 May (NED). *Proxenus miranda*, 5 coll. Kearney, Buffalo Co, 10-23 May (NED). *Crambodes talidiformis*, 6 coll. Kearney, Buffalo Co, 29 Apr-18 May (NED). *Spodoptera ornithogalli*, 5 coll. Kearney, Buffalo Co, 26 Apr-19 May (NED). *Xylena curvimaacula*, coll. 12 mi S of Chadron, Dawes Co, 16 Apr (RCR). *Copivaleria grotei*, 9 coll. Kearney, Buffalo Co, 16-28 Apr (NED). *Catabena lineolata*, 2 coll. Kearney, Buffalo Co, 16-17 and 22-23 Apr (NED). *Nycterothaeta luna*, singles coll. 12 mi S of Chadron, Dawes Co, 27 May and 23 & 29 July (RCR). *Discestra trifolii*, 30 coll. Kearney, Buffalo Co, 25 Apr-23 May (NED). *Agrotis ipsilon*, 2 coll. Kearney, Buffalo Co, 25-26 Apr (NED). *Heliothis subflexus*, coll. Kearney, Buffalo Co, 9 June (NED). *Schinia gaurae*, adults & larvae on *Gaura* sp. photo, Hover Prairie, Sarpy Co, 24 Jul-8 Aug (TB,BP,LP,JW).

CORRIGENDUM: In the 1984 Season Summary, Nebraska (NEWS Lep Soc, Mar/Apr 1985, 2:24)--delete *Catocala meskei*.

KANSAS. In general it was not a good year for butterflies. About 162 new county butterfly records, most of which are specimens located in the Ft Hays State University collection, were obtained. Only the most significant are outlined below. One new state record, *Eueides isabella*, was collected. Early and late dates are listed below if they exceeded the present extremes by a week or more. A few items of special local interest are included. State Coordinator: CAE. Contributors: JA, BLG, WHH, CH, DHO, MER, JAS, MDS, VLW, VLWr.

BUTTERFLIES: *Thorybes pylades*, GRAHAM Co, NORTHWEST, 3 June (MER). *Lerema accius*, CHEROKEE Co, 29 Sept (MDS). *Copaodes aurantiaca*, GREELEY Co, 1 July, EARLY. *Polites origenes*, 16 May, EARLY. *Wallengrenia egeremet*, 28 May, EARLY. *Pompeis verna*, ATCHISON, BROWN, and DONIPHAN Cos, 24 June (MDS). *Problema byssus*, ATCHISON Co, NORTHEAST, 24 June (MDS). *Euphyes dion*, more than usual, adding 3 new Cos in SE, 9 Sept; also DONIPHAN Co, NORTHEAST, 24 June (MDS). *Amblyscirtes vialis*, SEWARD Co, SOUTHWEST, 17 May (MDS). *A. belli*, NEMAH Co, NORTH, 25 June (MDS). *Battus philenor*, LOGAN Co, 1 July (CAE), casual in far west. *Heraclides cresphontes*, Wallace Co, 17 July, westernmost spec (CAE). *Pterourus glaucus*, yellow females reared from black female eggs (BLG). *P. multicaudatus*, coll. nr Colby, THOMAS Co, 16 Aug (VLW,VLWr). *Artogeia rapae*, early and late dates, 8 Feb and 6 Nov. *Zerene cesonia*, nr Colby, THOMAS Co, 28 July (VLW,VLWr). *Phoebis sennae*, early and late dates, 19 Apr and 22 Nov (east) and 20 Oct (west); unusual number of early sightings through June, but generally not widespread and abundant as in 1986 (CAE,BLG); notable exceptions included the Aug thousands of form *drya* described at Fredonia, Wilson Co in NEWS of Lep Soc, Nov/Dec 1987, 6:80-81 (WHH); individuals raised nr Ottawa, Franklin Co, were also form *drya* (BLG). *P. phileas*, nr Colby, THOMAS Co, 28 July (VLW,VLWr). *P. agarithe*, seen, DOUGLAS Co, 6 Aug (JA). *Kricognia lyside*, none reported. *Eurema mexicana*, widespread in west, June and July (CAE); nr Colby, THOMAS Co, 28 July (VLW,VLWr). *Pyrisitia lisa*, THOMAS Co, NORTHWEST, 8 Sept 1986 (VLW,VLWr). *P. nise*, BARTON Co, 12 Sept (MDS). *Abaeis nicippe*, BARBER Co, 2-4 Sept 1986 (JAS). *Calycopis cecrops*,

four new SE Cos; COFFEY Co, 2 Nov, LATE (MDS). Mitoura gryneus, unusually widespread and common in the east (MDS); 10 new counties; late date (west) 20 Oct. Euristymon ontario, FRANKLIN Co, 29 May (MDS). Leptotes marina, BARBER Co, 2-4 Sept 1986 (JAS). Hemiargus isola, common and widespread in east, late-Oct and early Nov, 6 new Cos (MDS). Celastrina argiolus, late date (west) 29 Oct. Libytheana bachmanii, uncommon. Agraulis vanillae, fair numbers in east, west to PAWNEE Co (CH); at Ottawa, Franklin Co, first appearance was 15 July and by late Aug they were very abundant, emerging as late as 7 Oct (BLG). Eueides isabella, STATE, slightly damaged female, nr Emporia, LYON Co, 13 July 1986 (MDS); coll, 1 mi W of Colby, THOMAS Co, 22 July (VLW, VLWR). Heliconius charitonius, 2 coll, THOMAS Co, 17 and 19 July 1986 (VLW). Speyeria idalia, THOMAS Co, 21 July 1986 (VLW) and WALLACE Co, 18 June (MDS), only casual in west. Thessalia fulvia, a few late; EDWARDS Co, 13 July (MDS) and Ellis Co, 2 Nov, LATE (CAE). Phyciodes vesta, THOMAS Co, 20 July 1986 (VLW). P. picta, late date (west) 12 Sept (MDS); large colony, Barton Co. Polygonia interrogationis, early dates, 11 Feb (east), 13 Mar (west). P. comma, early dates, 7 Mar (east) and 13 Mar (west); SHERMAN Co, 24 June (CAE), few records from NW. P. progne, late date (east) 28 Oct. Nymphalis antiopa, early dates 4 Feb (east) and 10 Feb (west). Vanessa cardui, rare all year (WHH). Mestra amymone, only report was 2, Ellis Co, 28 Sept (DH). Anaea aidea, THOMAS Co, 18 Aug 1986 (VLW). A. andria, early date 11 Feb (east). Asterocampa clyton, seen, RAWLINS Co, NORTHWEST, 4 June 1986 (CAE). Megisto cymela, KIOWA Co, 17 June (MDS), rare this far SW. M. rubricata, coll, Barber Co, 2-4 Sept 1986, LATE (JAS). Danaus plexippus, scarce compared to most years (WHH). D. gilippus, none reported.

MOths: SATURNIIDAE - Sphingicampa bicolor, 17 Aug; Actias luna, 14 Aug, both nr Ottawa, Franklin Co (BLG). Hyalophora cecropia, pupated on garden peonies, Ottawa, Franklin Co (BLG).

CORRIGENDUM: In the 1986 Season Summary, Kansas (NEWS Lep Soc, Mar/Apr 1987, 2:30)--delete Lycorea cleobaea.



ZONE 6 SOUTH CENTRAL: OKLAHOMA, TEXAS, ARKANSAS, LOUISIANA. Coordinator: Ed Knudson (ECK). Contributors: Steve Cary (SC), David Eiler (DE), H. A. Freeman (HAF), Larry Gall (LG), Chuck Harp (CH), David Hawks (DH), Michael Israel (MI), Ron Leuschner (RL), Paul Opler (PO), Babs & Loren Padelford (P), Leo Paulsen (LP), Ray Stanford (RS), Ann Swengel (AS), Robert Warren (RW), Steve Williams (SW). County in CAPS. = new county record; STATE = state record; U.S. = United States record; NP = National Park; SP = State Park; NWR = National Wildlife Refuge; WMA = Wildlife Management Area; UV = ultraviolet; MV = Mercury Vapor; bait = bait traps or baited trees; sight or photo = sight record or photograph, specimens not collected.

OKLAHOMA. Contributing: LG, DH, CH, RW.

BUTTERFLIES: None reported.

MOths: CH submitted a list of 28 species of Catocala, including some collected by LG, DH, & RW. Two new state records and two county records were noted. The most interesting records include judith, flebilis, and serena (STATE), McAlester, PITTSBURG Co, 28, 29 June (RW); insolabilis, ulalume, McAlester, 29 June (RW); recta (STATE), Coyle, LOGAN Co, 15 July, bait (CH); herodias, 3 mi W of Luther, Oklahoma Co, 26 May-7 June, UV (CH) and Lawton, Comanche Co, 24, 25 May (LG, DH, CH) & Medicine Park, Comanche Co, 25 May (CH); coccinata, 3 mi SW of Luther, 22 May-2 June (CH); amestris, 3 mi SW of Luther, 26 May-6 June & Medicine Park, 25 May (CH); abbreviatella, 3 mi SW of Luther, 10 June & Medicine Park, 25 May (CH); messalina, 3 mi SW of Luther, 28 May-6 June (CH) & Lawton, 24-25 May (LG, DH, CH); consors, 3 mi SW of Luther, 10 June (CH); pretiosa, 3 mi SW of Luther, 31 May (CH); titania, 3 mi SW of Luther, 27 May-5 June (CH); alabamiae, 3 mi SW of Luther, 29 May-8 June (CH); minuta, 3 mi SW of Luther, 23 May (CH).

TEXAS. Contributing: SC, DE, HAF, MI, ECK, RL, PO, P, RS, AS, SW. After a mild winter, especially in SE Texas, a cold front brought freezing temperatures south to Houston and San Antonio in late March. Spring rainfall was above normal for much of the state, but the summer was quite dry, with no tropical storms.

BUTTERFLIES: Many interesting species were recorded state wide, including many county records, 1 probable state record, and 1 U.S. record. PO (with SC and RS) submitted a formidable list including 106 county records, mainly from seldom collected counties in north Texas. NOTE that species from this list, reported jointly by PO, SC, and RS, will be listed under (PO), as actual collectors or observers were not indicated. Phocides palemon lilea, Hidalgo Co, Santa Ana NWR, 21 June, sight (P); Chionides catillus albofasciatus, Laguna Atascosa NWR, Cameron Co, 23 March (DE) & Aransas NWR, Aransas Co, 12 Oct, photo (AS); Chionides zilpa namba, Santa Ana NWR, 23 Nov (ECK); Urbanus teleus, Salenito, Starr Co, 26 March (DE); Achalarus casica, 7 mi SE of Ft Davis, Jeff Davis Co, 13 Aug (RL); Thorybes drusus, 7 mi SE of Ft Davis, 13 Aug (RL); Pellicia arina, Santa Ana NWR, 23 Nov (ECK); Erynnis tristis tatus, Caprock Canyon SP, BRISCOE Co, 9 May, and 11 mi S of Crosbyton, CROSBY Co, 8 May (PO); Heliopterus macaira, Aransas NWR, 28 March (DE); Yvretta rhesus, (STATE), 3 mi W of Hwy 97 & FM 1065 Jct, FLOYD Co, 8 May, sight (close) (PO); Hesperia uncas, 2 mi W of Ady, OLDHAM Co, 9 May (PO); H. viridis, 3 mi N of Brice, HALL Co, 9 May, and 15 mi N of Clarendon, DONLEY Co, 9 May (PO); Atrytonopsis hianna, 15 mi N of Clarendon, DONLEY Co, 9 May & 11 mi S of Crosbyton, CROSBY Co, 8 May (PO); Amblyscirtes aenus, 6.7 mi S of Post, GARZA Co, 8 May (PO); A. osleri, 6.7 mi S of Post, GARZA Co, 8 May, and Caprock Canyon SP, BRISCOE Co, 9 May (PO); A. nysa, Caprock Canyon SP, BRISCOE Co, 9 May (PO); A. eos, Caprock Canyon SP, BRISCOE Co, 9 May, and 16 mi S of Crosbyton, CROSBY Co, 8 May (PO); Panoquina panoquinoides, Laguna Atascosa NWR, 23 March (DE); Megathymus texanus, 11 mi S of Crosbyton, 8 May, & Caprock Canyon SP, Donley Co, and 7.9 mi S of Clarendon, CROSBY Co, 9 May (PO); Pterourus multicaudatus, Big Spring, HOWARD Co, 8 May (PO); Falcapica midea, Aransas NWR, ARANSAS Co, 28 March (DE); Eurema boisduvaliana, Pyrisitia proterpia, Santa Ana NWR, 23 Nov (ECK); Fixsenia ontario, Mitoura gryneus, Caprock Canyon SP, BRISCOE Co, 9 May (PO); Ministrymon clytie, Santa Ana NWR, 22 June, photo (P); Calephelis rawsoni, Guadalupe River SP, Comal Co, 12 Sept (MI); Cario ino melicerta, Laguna Atascosa NWR, 11 Oct, photo (AS); Emesis tenedia, Santa Margarita Ranch, STARR Co, 8 Oct, photo, U.S. (AS) [det. by Roy Kendall from photo, this species was first collected in Texas in 1986]; Dryas iulia, Santa Ana NWR, 24 March (DE); Heliconius charitonius vasquezae, Santa Ana NWR, 24 March (DE) also 9 Oct, sight (AS); Euptoieta hegesia hoffmanni, Penitas, Hidalgo Co, 23 Nov, sight (ECK); Poladryas minuta, Big Spring, HOWARD Co, 8 May & 2 mi S of Gail, BORDEN Co, 8 May (PO); Thessalia theona bolli, Laguna Atascosa NWR, 23 March (DE); Charidryas gorgone, 16 mi S of Crosbyton, CROSBY Co, 8 May (PO); Dymasia dymas, Limpia Creek, Jeff Davis Co, 11 Aug (RL); Anthanassa ptoilyca, Santa Ana NWR, 24 March (DE); Phyciodes picta, 2 mi N of Akerly, DAWSON Co, 8 May (PO); Junonia evarete zonalis?, Brazos Island SP, Cameron Co, 27 March (DE); Anartia fatima, Santa Ana NWR, 24 March (DE), 21 June, photo (P), and Santa Margarita Ranch, 8 October, sight (AS); Siproeta stelenes biplagiata, Santa Ana NWR, 23 Nov, sight (ECK); Myscelia ethusa, Santa Ana NWR, 21 June, sight (P), 9 Oct, sight (AS); Eunica monima, Santa Ana NWR, 9 Oct, sight (AS); Epiphile adrasta, Santa Ana NWR, 21, 22 June, photo (P) (2nd reported occurrence in U.S.); Mestra amymone, Guadalupe River SP, 12 Sept (MI); Anaea andria, 18 mi S of Gail, BORDEN Co, 8 May (PO); Megisto rubricata, Santa Margarita Ranch, STARR Co, 8 Oct, sight (AS) & 6.7 mi S of Post, GARZA Co, 8 May (PO); Danaus eresimus montezuma, Santa Ana NWR, 9 Oct, sight (AS).

MOths: Several good moth lists were submitted, a trend that hopefully will continue. No new U.S. records, but about 25 State records. Catocala collecting was down from 1986, especially the black-winged species. HELIOZELIDAE -

Coptodisca lucifluella, Bellaire, HARRIS Co, 12 Aug. TINEIDAE - Mea skinnerella, Six Mile, SABINE Co, 18 July. GRACILLARIIDAE - Caloptilia superbifrontella, Six Mile, SABINE Co, 23 Aug; Acrocercops albinatella, Six Mile, SABINE Co, 18 July. OECOPHORIDAE - Agonopterix robinella, Gene Howe WMA, HEMPHILL Co, 25 June. COSMOPTERIGIDAE - Cosmopterix molybdina, Six Mile, SABINE Co, 23 Aug. GELECHIIDAE - Symmetrischema plaesiosema, Dichomeris aleatrix, Gene Howe WMA, HEMPHILL Co, 26 June; D. ochripalpella, Six Mile, SABINE Co, 5 June. YPONOMEUTIDAE - Yponomeuta multipunctella, Six Mile, SABINE Co, 22 May. CHOREUTIDAE - Prochoreutis inflatella, Six Mile, SABINE Co, 5 June & Gene Howe WMA, HEMPHILL Co, 27 Sept. TORTRICIDAE - Phaneta umbristiana, 6 June & Accleris maculidorsana, 22 May, Six Mile, SABINE Co; Archips magnoliana, Double Lake, SAN JACINTO Co, 12 May [preceding are all STATE (ECK)]. PYRALIDAE - Colonychus talis, Chisos Basin, Big Bend NP, Brewster Co, 12 Aug (RL); Lygropia rivulalis, Gene Howe WMA, HEMPHILL Co, 25 June, STATE (ECK); Crambus bidens, Double Lake, SAN JACINTO Co, 31 May, STATE (ECK); Satole ligniperdalis, Gene Howe WMA, 27 Sept. GEOMETRIDAE - Semiothisa piccoloi, Davis Mts SP, Jeff Davis Co, 11 Aug, possible STATE (RL); Glaucina dispersa, Big Bend NP, BREWSTER Co, 12 Aug, STATE (RL); Stenoporpia blanchardi, Lambdina vitraria, Nemoria subsequens, Big Bend NP, 12 Aug (RL); Episemasia solitaria, Double Lake, 22 March (ECK); Lytrosia sinuosa, Bouton Lake, JASPER Co, 25 April, STATE (ECK); Cyclophora dataria, 18 mi W of Ft Davis, Jeff Davis Co, 13 Aug (RL). LASIOCAMPIDAE - Gloveria gargamelle, Davis Mts SP, 11 Aug (RL). SATURNIIDAE - Sphingicampa hubbardi, Pedernales Falls SP, BLANCO Co, 13 Sept (MI); Eupackardia callata, Palmito Hill, Cameron Co, 27 March (DE). SPHINGIDAE - Sphinx dolli, Guadalupe River SP, Comal Co, 11 Sept (MI); Manduca jasminearum, Six Mile, SABINE Co, 5 June (ECK); Laotloe juglandis, Davis Mts SP, 11 Aug (RL). NOTODONTIDAE - Schizura concinna, Six Mile, 23 Aug (ECK); Hyparxenus minor, Big Bend NP, 12 Aug (RL). ARCTIIDAE - Cisthene picta, Gene Howe WMA, 27 Sept (ECK); Cisthene angelus, Big Bend NP, 12 Aug (RL); Euchaetes helena, Davis Mts SP, 11 Aug (RL); E. polingi, Big Bend NP, 12 Aug (RL). LYMANTRIIDAE - Dasychira mescalera, Big Bend NP, 12 Aug (RL). NOCTUIDAE - Zanclognatha atrilineella, Brazos Bend SP, Ft Bend Co, 25 May (ECK); Z. martha, Six Mile, 22 May (ECK); Renia hutsoni, Big Bend NP, 11 Aug (RL); Sigela basipunctaria, Davis Mts SP, 11 Aug (RL); Metalectra edilis, Big Bend NP, 12 Aug (RL); Goniocarsia electrica, Epitausa prona, Latebraria amphipyroides, Santa Ana MWR, 23 Nov, bait (ECK); Synedoida grandirena, Six Mile, 22 May (ECK); Toxonprucha pseugmapteryx, Matigramma inopinata, M. emmilla, M. obscurior, Big Bend NP, 12 Aug (RL); Catocala-HAF reported only 14 sp. from Garland, Dallas Co, including piatrix, muliercula, insolabilis, maestosa, carissima, & amatrix, while ECK collected 24 sp., the best being innubens, consors, meskei, neogama, amestris, abbreviatella, and minuta from Gene Howe WMA, 25, 26 June; clintoni, Six Mile, 26 April; lincolnana, orba, andromedae, mira, and grynea, Six Mile, 22 May; Lithacodia carneola, Gene Howe WMA, HEMPHILL Co, 25 June, STATE (ECK); Acronicta spinigera, Six Mile, 22 May; A. hammamelis, Six Mile, SABINE Co, 22 May, possible STATE (both ECK); A. modica, Six Mile, 23 Aug (ECK); Meropleon titan, Gene Howe WMA, 27 Sept; M. ambifucsa, Gene Howe WMA, HEMPHILL Co, 27 Sept (STATE) (both ECK); Hydraecia medialis, BAILEY Co, Muleshoe, 23 Aug, STATE (SW); Lythrodus tripunctata, Davis Mts SP, 11 Aug (RL); Nacopa melanderi, Big Bend NP, 12 Aug (RL); Anathix aggressa, Oncocnemis iricolor, Gene Howe WMA, 25 June (ECK); Polia ruana, Big Bend NP, 12 Aug (RL); Melanchra picta, Gene Howe WMA, 25 June; Ufeus plicatus, Gene Howe WMA, HEMPHILL Co, 25 June (STATE) (both ECK); Agrotis orthogonia, Trichosilia austrina, Euxoa melana, E. cinereopallida, E. cicatricosa, E. teleboa, Gene Howe WMA, 27 Sept (ECK); Euxoa camalpa manca, Big Bend NP, 12 Aug (RL); Protoschinia scutosa, 18 mi W of Ft Davis, 13 Aug (RL); Schinia petulans, S. simplex, S. florida, Gene Howe WMA, 27 Sept (ECK); Schinia hanga, Seymour, BAYLOR Co, 26 Sept (ECK).

ARKANSAS. Contributing: LP.

MOTHS: HAF sent in a list of Catocala, collected at Fayetteville by LP, who reported poor collecting due to bad weather. The following Catocala species were collected in the Fayetteville area during August - innubens, epione, lacrymosa, angusi f. lucetta, insolabilis, amatrix, carissima, and cara.

LOUISIANA. No reports!

ZONE 7 ONTARIO/QUEBEC. Coordinator: Ross Layberry (RAL). Contributors: Gerry Clements (GC), G. J. van Dorsser (GD), W. J. D. Eberlie (JE), W. M. M. Edmonds (WE), Henry and George Hensel (HH), Quimby Hess (QH), Ben and Brenda Kulon (BK), Bernard Landry (BL), Bill Lamond (WL), Jeff Larson (JL), John Prideaux (JP), Duncan Robertson (DR), George Sutton (GS), John P. Walas (JW).

ONTARIO. BUTTERFLIES: Erynnis persius, Walpole Island, Lambton Co, 17 May (BK). Pyrgus centaureae freija, 18 km E of Cochrane, Cochrane Distr, 2 June (QH). Hesperia leonardus, Barron River, Algonquin Park, Nipissing Distr, 3 Aug and 5 km N of Chalk River, Renfrew Co, 5 Sept (RAL). Poanes massasoit, Walpole Island, Lambton Co, 5 July (BK); London, Middlesex Co, 15 July (GS). P. viator, Hullett Cons Area, Huron Co, 12 July and London, Middlesex Co, 5 July (GS). Euphyes dion, Don River, Toronto, 6 July (WE); 3 km SW of Alexandria, Glengarry Co, 12 July (RAL). E. dukesi, Oxley, Essex Co, 26 July (DR). E. conspicua, Backus Woods, Norfolk Co, 5 July (JP). Amblyscirtes hegon, Burkes Falls, Parry Sound Distr, 7 June (GS). A. vialis, Twin Lakes, Peterborough Co, 10 May (JE). Heraclides cresphontes, Walpole Island, Lambton Co, 17 May (BK, GC). Fifty Point Cons Area, Hamilton-Wentworth, 7 Aug (WL). Artogeia virginienensis, Crawford Lake, Halton Co, 7 May (JP). Colias interior, 4 km S of Emma Lake, Algonquin Park, Nipissing Distr, 27 June (RAL). Pyrissitia lisa, Pinery Prov Park, Lambton Co, 7 June & Brights Grove, 24, 27 July (BK); Lasalle, Essex Co, 18 July & Windsor, Essex Co, 22 Aug, 12, 19 Sept (JL). Harkencelenus titus, Kakabeka Falls, Thunder Bay Distr, 7 July (JW). Satyrrium caryaevorum, Gannons Narrows, Peterborough Co, 19 Aug (GD). Incisalia henrici, found ova on Black Buckthorn, Rhamnus frangula, at three Ottawa area locations, 18, 27, 28 May. Reared two, pupated 10, 15 June on the surface of the soil beneath a thick layer of dead leaves (RAL). Lycaides melissa samuelis, Yogi Bowl, near Pinery Prov Park, Lambton Co, 20, 24 May & 19, 23 July (BK); Port Franks, Lambton Co, 19 July (BK), 15, 30, 31 May, 23 July (GC). Libytheana bachmanni, Lambton Mills, Toronto, 17 July (WE). Euptoieta claudia, St. Mary's, Perth Co, no date (QH). Charidryas harrisii, North Bay, Nipissing Distr, 21 June (QH). Phyciodes batesii, 23 km N of Iroquois Falls, Cochrane Distr, 24 June (QH). Asterocampa clyton, Goderich, Huron Co, in bait trap, 28 June (GS). Satyrodes appalachia, Don River, Toronto, 6 July (WE). Coenonympha inornata, SW range extension to 2 km SW of Zurich, Huron Co, 29 May and 2 km W of Hersall, Huron Co, 30 May (QH); Macmillan Twp, Cochrane Distr, 22 June (QH). Cercyonis pegala nephele, NE range extension to 9 km E of Matheson, Cochrane Distr, 26 July; 33 km E of Timmins, Cochrane Distr, 25 July (QH). Erebria disa, 22 km N of Iroquois Falls, Cochrane Distr, 24 June (QH).

MOTHS: SESIIDAE - From Thunder Bay, all taken in pheromone traps, as part of a survey of Sesiidae of Canada organized by P. T. Dang. Albuna pyramidalis, 3 July, three. Synanthedon exitiosa, late May to Aug, common. S. fulvipes, late May to mid June, common. S. pictipes, early June to mid July, common. S. novarensis, mid June to early July, common. S. corni, early to mid July, rare. S. proxima, 23 June, one, 3 Aug, two. S. bolteri, 24 June, one, 4 July, one. S. acerni, 4 July, one. Podesesia syringae, June 10, one. Sesia tibialis, 25 July, one, 7 Aug, one (JW). SPHINGIDAE - Eumorphia pandorus, Exeter, Huron Co, 15 Oct (GS).

QUEBEC. BUTTERFLIES: *Pyrgus centaureae freija*, Mt Albert, Gaspé, 12 July (HH). *Thymelicus lineola*, km 133.4, James Bay Hwy, 15 July; km 0, JBH, 21 July. At both locations the roadside had been seeded with legumes and grasses, including Timothy Grass (RAL). *Hesperia comma*, Mt Albert, Gaspé, 12 July (HH); km 6.8, Caniapiscaw Hwy, 19 July. *Polites coras*, 12 km W of Matagami, Mun de la Baie James, 21 July. *P. mystic*, km 95.8 JBH, 15 July; km 252.2, JBH, 20 July. *Colias pelidne*, at six locations from km 494, JBH and north, 16-19 July. *C. interior*, at many locations between La Verendrye Park and km 439.5 JBH; also flying with *pelidne* at km 34.8, Chisasibi Hwy, 16-21 July. *Epidemia epixanthe*, km 199, 320.8 and 433, JBH, 19-20 July; at each colony flying with the next species. *E. dorcas*, abundant at many locations the whole length of the JBH, in all habitats, with or without the presence of *Potentilla fruticosa*, 16-21 July. *Lycaeides idas*, common at many locations north from km 252.2, JBH, 16-20 July. *Plebejus aquilo*, km 605 JBH, 16 July; km 20.9 Caniapiscaw Hwy, 18 July. *Speyeria aphrodite*, km 173.3 on Hwy 109, Mun de la Baie James, 21 July. *S. atlantis*, common at many locations north to km 531 JBH, 16-21 July. *Polygonia gracilis*, km 173.3 Hwy 109, Mun de la Baie James, 21 July. *Vanessa virginiensis*, larvae on *Anaphalis margaritacea* and *Gnaphalium obtusifolium* at many locations north to km 37 JBH, 20, 21 July. *Coenonympha inornata*, km 531 and 596.5 JBH; km 8.6 Chisasibi Hwy; km 4.6, Caniapiscaw Hwy, 16-19 July (RAL); Mt Albert, Gaspé, 12 July (HH). *Oeneis taygete gaspensis* and *O. polixenes*, Mt Albert, Gaspé, 12 July (HH).

MOths: ARCTIIDAE - *Platartia parthenos* and *Grammia quenseli*, Mt Albert, Gaspé, 12 July. *G. virguncula*, larvae on bog plants, Temiscouata Co, May (HH). *Spilosoma latipennis*, Melocheville, 13 June, one in a UV trap, second Provincial record (BL). NOCTUIDAE - *Syngrapha montana* (not previously reared) and *S. microgramma neartica*, 6-16 June, larvae of both species reared on *Ledum groenlandica*. *Exyra rolandiana*, larvae in *Sarracenia purpurea*, May. *Oligia miniscula grahami*, 8 Sept. *Xylotope acadia*, 31 Aug. *Anarta luteola*, 19-26 May, larvae reared on *Vaccinium oxycoccus*, never reared before. *Lasionycta* new sp., 6 June-1 July, all from a bog in Temiscouata Co (HH). *Aprostola ovalis*, Mt St Bruno, 18 July, three in a malaise trap, only two previous Canadian records. *Noctua pronuba*, Mount-Royal, 22 June, one in a light trap; Longueuil, 10, 13 Aug, two at sugar bait; first Quebec records, the species seems to be rapidly expanding its range westward from Halifax where it was introduced in 1979 (BL).



ZONE 8 MIDWEST: MISSOURI, KENTUCKY, WEST VIRGINIA, OHIO, INDIANA, ILLINOIS, IOWA, MINNESOTA, WISCONSIN, MICHIGAN. Coordinator: Leslie A. Ferge (LF). Contributors: Thomas J. Allen (TA), Valeriu Albu (VA), George Balogh (GB), James W. Becker (JWB), Larry E. Becker (LEB), Jim Bess (JB), Susan Borkin (SB), Tanya Bray (TB), John V. Calhoun (JVC), Thomas W. Carr (TWC), Ho H. Chuah (HHC), Randy Combs (RC), Robert Dana (RD), David Eiler (DE), Carol Ferge (CF), Richard Fleming (RF), J. Michael Gilligan (JMG), Todd M. Gilligan (TMG), Harry W. Godwin (HWG), Richard A. Henderson (RAH), Ted Herig (TH), David F. Hess (DH), Randy Hoffman (RH), David C. Iftner (DCI), Samuel A. Johnson (SJ), Leroy C. Koehn (LCK), Irwin Leeuw (IL), Irving G. Loewit (IGL), Vincent P. Lucas (VPL), Leland L. Martin (LLM), James Mow (JM), Steve Mueller (SM), Jeff Nekola (JCN), Mogens C. Nielsen (MCN), Tim Orwig (TTO), C. Douglas Overacker (CDO), Barbara Padelford (BP), James Parkinson (JP), David K. Parish (DKP), Harry Pavulaan (HP), John W. Peacock (JWP), Michael Reese (MR), Joseph E. Riddlebarger (JER), Roy W. Rings (RWR), Dennis W. Schlicht (DWS), Brian Scholtens (BS), Clark Schultz (CS), James Scott (JS), Yale Sedman (YS), John A. Shuey (JAS), Ernest Shull (ES), Henri C. Siebert (HCS), Alan Smith (ALS), Ann K. Stafford (AKS), Ann Swengel (AS), William Taft (WT), Donald R. Tangren (DRT), James A. Toot (JAT), David Van Kirk (DVK), John Weber Jr. (JW), William Westrate (WW), James R. Wiker (JRW), Donald J. Wright (DJW). GENERAL COMMENTS: An early onset of warm weather, following a mild winter, was the rule throughout the zone, with a hot and dry summer reported in several areas. Most spring-emerging species were appearing two weeks or more before usual, closely duplicating the early emergences reported last season. *B. philenor* was observed to be up in numbers, while *Hairstreaks* were generally scarce. The most outstanding aspect of the season was the major influx of southern migrant butterflies, far exceeding that reported last season. Species being found in large numbers or extending well into northern areas (often very early in the season) include *P. communis*, *H. phyleus*, *Z. cesonia*, *P. sennae*, *E. lisa*, *N. iole*, *H. isola* and *E. claudia*. *E. protodice* also turned up in several areas. Strangely, the noted migrants *V. cardui* and *D. plexippus* were reported in below-average numbers. The number of migrant moth species encountered was fewer than last year. *Mamea orbifera* again appeared early and bred in the north. The most noteworthy event of the season was the "once in a lifetime" flight of *P. sennae*. Reported last year only in Kentucky and west-central Illinois, it was recorded this season in most parts of the zone. The insurgence began in early May in West Virginia, Ohio and Illinois, with individuals appearing in southwestern Wisconsin by the last of June. It appears that the initial influx moved northward via "corridors" defined by the Mississippi, Ohio, Missouri and Illinois River valleys. Numbers "exploded" in July-August, with record swarms seen in Missouri and Illinois, plus widespread occurrence noted across Ohio and southern Iowa. Breeding populations, utilizing *Cassia* sp. as larval hosts, were reported in several areas. Two generations occurred in West Virginia and Ohio. New county records are designated by capitalized county names, and new state records by the STATE notation.

MISSOURI. Two reports were received. Weber submitted a list from Holt County. Pavulaan sent records from St. Louis and vicinity, giving special mention to *P. sennae*, which he found "incredibly" abundant in July and August. It outnumbered all other species in many locations, swarming on flowers along streams at St. Francois State Park. Larvae in all stages were found throughout the summer on *Cassia fasciculata*, with plants being defoliated in Affton. A mass movement northeastward was seen in early September, followed by a near-absence the rest of the month. Fresh late-season emergers appeared in October. A male was sighted in St. Louis on 3 December, LATE for that area.

BUTTERFLIES: *A. campestris*, 23 Nov (late), St. Louis Co (HP); *E. marcellus*, 3 May, Holt Co (JW); *P. protodice*, 22 Nov (late), St. Louis Co (HP); *P. sennae*, July to 3 Dec, Jefferson, St. Charles, ST. FRANCOIS, & St. Louis Cos (HP); *N. iole*, 22 Nov (late), St. Louis Co (HP); *M. gryneus*, 6 May, Holt Co (JW); *H. isola*, 12 Oct-4 Nov, St. Louis Co, late season colony associated with *Coronilla varia* (HP).

KENTUCKY. No reports.

WEST VIRGINIA. Tom Allen provided a detailed update of work on the West Virginia Butterfly Survey. Two new state records and 249 new county records were added, reflecting a very successful season. The season was very good for butterfly populations and many species were found in abundance. The mild winter of 1986-87 enabled several southern pioneering species to invade the state, the most notable being *P. sennae*, reported for the first time.

BUTTERFLIES: *A. lyciades*, 6-10 July, McDOWELL Co; *E. horatius*, 6-14 July, CALHOUN, LINCOLN, PENDLETON, RANDOLPH, WETZEL and WYOMING Cos; *E. martialis*, 6-7 July, BOONE, LINCOLN, WYOMING Cos; *L. accius*, 9-12 Aug, Jefferson, RANDOLPH Co; *H. phyleus*, 25-26 Aug, GREENBRIER, MONROE, RANDOLPH Cos; *Euphyes conspicua*, 12 July, Crainsville Swamp, PRESTON Co, STATE; *H. cressphontes*, 6-10 June, MERCER Co; *P. protodice*, May, 7 July, BOONE, GRANT Cos; *Phoebis sennae*, early May to mid-Aug, at least two generations of adults collected, BOONE, HAMPSHIRE, HARDY, JEFFERSON, KANAWHA, RANDOLPH and WYOMING Cos, STATE; *E. nicippe*, July-Aug, McDOWELL, RANDOLPH, WYOMING Cos, found with *P. sennae* on or near *Cassia*; *E.*

tarquinius, 8 July, MERCER, MONROE, TUCKER, WAYNE Cos; S. caryaevorum, 8 July, MONROE Co; S. liparops, 8-9 July, MONROE, WYOMING Cos; P. m-album, 9 May, 21 Aug, BRAXTON, McDOWELL, POCAHONTAS Cos; C. borealis, 6-10 July, MERCER Co; S. idalia, 26 Aug, Monroe Co; S. appalachia, 12 July, PRESTON Co (all TA).

OHIO. The Ohio Lepidopterists experienced another productive year. Butterfly records from numerous contributors were compiled by David C. Iftner, with 563 new county records being added. Eric Metzler compiled the moth report, which includes four new state records and many county records. Several collectors spent hundreds of hours in the field, with special mention going to Roy Rings, who made a special effort to visit poorly-known counties, collecting over 12,000 moth specimens and adding several hundred new county records. Iftner reports that a mild winter was followed by a very early spring, for the second year in a row. The first spring butterflies were recorded the first days of April. Spring and summer were drier than usual, with fall arriving early, with frosts in September. Migrant butterflies were up in numbers, with many species reported. Phoebis sennae was seen in record numbers, with the first specimens, mostly females, being collected in May. By July, sightings were being made all over Ohio, with numbers peaking in late July to early August. The last adults were seen in September. The Ohio River and its tributaries appeared to serve as corridors for dispersal. This was the first record of sennae reproducing in Ohio; a possible two generations were produced, with much overlapping. Larvae were found on Partridge Pea (Cassia fasciculata) and Wild Senna (C. hebecarpa).

BUTTERFLIES: S. hayhurstii, 30 May, 8 Aug, ADAMS Co (JVC), CLERMONT Co (LEB); E. horatius, 16 June-5 Sept, ASHTABULA, MADISON Cos (DKP), FAYETTE, MIAMI Cos (JVC); E. baptisiae, 21 Apr-3 Sept, ADAMS, UNION Cos (JVC), ALLEN Co (DCI), CLARK Co (CDO, AKS), CLERMONT Co (LEB), CLINTON, FULTON, KNOX, MADISON Cos (DKP), PREBLE Co (HHC); P. communis, 23 Aug-14 Sept, CLARK Co (CDO, AKS), LOGAN Co (DKP), MADISON, MEIGS Cos (JVC); H. phyleus, 20 Aug-7 Sept, CLERMONT, MADISON Cos (JVC), FULTON Co (DKP); H. leonardus, 1-5 Sept, GALLIA Co (JVC), PIKE, ROSS Cos (DKP); H. metea, 24 May, PERRY Co (DKP); H. sassacus, 16 May, COSHOCOTON Co (DKP); P. origenes, 5 June-8 July, CLERMONT Co (LEB), COLUMBIANA Co (JVC), WARREN Co (DKP); P. mystic, 7-11 June, MORROW, TRUMBULL Cos (DKP); A. campestris, 25 July-7 Sept, BROWN Co (HHC), CLARK Co (CDO, AKS), CLERMONT Co (LEB), CLINTON, MADISON, PREBLE Cos (JVC); A. logan, 19 June-23 Aug, BUTLER Co (JWB), CLERMONT Co (LEB), PICKAWAY Co (JVC), ASHTABULA, CRAWFORD, COSHOCOTON, GALLIA, KNOX, and RICHLAND Cos (DKP); P. viator, 12-17 July, FULTON, RICHLAND, TRUMBULL Cos (DKP); E. dion, 12-14 July, RICHLAND, TRUMBULL Cos (DKP), SANDUSKY, WOOD Cos (JVC); E. dukesi, 11-16 July, ALLEN Co (JVC, DCI), KNOX, RICHLAND Cos (DKP); E. conspicua, 30 June-13 July, DELAWARE Co (JVC), ASHTABULA, HOLMES, MUSKINGUM Cos (DKP); E. bimacula, 3 July, SHELBY Co (DKP); A. hegon, 16 May, LAWRENCE Co (JVC, DCI); A. vialis, 26 Apr-30 May, BELMONT Co (VFL), CLERMONT Co (LEB), KNOX, TUSCARAWAS Cos (JVC); P. ocola, 30 Aug, MADISON Co (JVC); B. philenor, 13 July-16 Aug, CLARK Co (CDO, AKS), CLERMONT Co (LEB), HARDIN Co (DCI), ASHTABULA, FULTON Cos (DKP); E. marcellus, 20 June, MADISON Co (DKP); H. cresphontes, 24 July-16 Aug, CLARK Co (CDO, AKS), CLERMONT Co (LEB), FAYETTE Co (DCI), MADISON Co (JVC); P. protodice, 7 Sept, BROWN Co (JVC); A. mideia, 19 Apr-16 May, BELMONT Co (DCI), CLERMONT Co (LEB), COSHOCOTON Co (DKP), HARRISON Co (JVC, DCI), HOLMES, KNOX, PICKAWAY Cos (JVC); P. sennae, 24 May-5 Sept, ADAMS, FAIRFIELD, LAWRENCE, MADISON, MARION, and SCIOTO Cos (JVC), BROWN Co (HHC), BUTLER Co (JWB), CLERMONT Co (LEB), DARKE, PREBLE Cos (DCI), LUCAS Co (TWC), HOCKING, VINTON Cos (DKP); E. lisa, 29 June-20 Aug, CLINTON, FULTON, MADISON Cos (DKP); E. nicippe, 12 July to 8 Aug, DARKE Co (DCI), GREENE, MADISON Cos (JVC); F. tarquinius, 2 May-4 Sept, BELMONT Co (LCK), GREENE Co (IGL), LORAIN Co (LLM), SCIOTO Co (JVC); H. titus, 21 June-9 July, CLARK Co (CDO, AKS), COSHOCOTON, JACKSON, KNOX, SHELBY Cos (DKP); S. acadica, 24 June, SHELBY Co (DKP); S. edwardsii, 27 June, FULTON Co (DKP); S. caryaevorum, 13 July, CLERMONT Co (LEB); M. gryneus, 8-16 May, 3-8 July, GALLIA, LAWRENCE Cos (JVC), GREENE, JACKSON, WARREN Cos (DKP); I. augustus, 18 Apr, ADAMS Co (JVC); I. niphon, 1 May, JACKSON Co (DCI); P. m-album, 18 Apr-2 May, ADAMS Co (JVC), BELMONT Co (HNG), LAWRENCE Co (DCI); C. neglecta, 13 June, CARROLL Co (JVC); L. bachmanii, 11 June-20 Sept, CLARK Co (CDO, AKS), CLERMONT Co (LEB), FAYETTE Co (JVC), PREBLE Co (HHC), ASHTABULA, FULTON, RICHLAND, TRUMBULL Cos (DKP); E. claudia, 12 July-18 Oct, ASHTABULA Co (DKP), CLERMONT, DARKE, PICKAWAY, PREBLE Cos (JVC), HARDIN Co (JWP), MADISON Co (DCI), MORGAN Co (JVC, JER); S. aphrodite, 31 July, PERRY Co (DKP); C. selene, 13 July, ASHTABULA Co (DKP, LLM); E. phaeton, 14 June, GALLIA Co, (JVC); P. progne, 10-17 July, LOGAN Co (DKP), MADISON Co (JVC); N. milberti, 22 June, 12 Nov, CLERMONT Co (LEB), MADISON Co (DKP); V. cardui, 11 May, 5 Sept, CLARK Co (CDO, AKS), PREBLE Co (JVC); J. coenia, 22 June-5 Sept, DARKE & FAYETTE Cos (JVC), HOLMES, MADISON Cos (DKP); E. anthedon, 24 June-2 Aug, CLARK Co (CDO, AKS), FULTON, KNOX, SHELBY, & TRUMBULL Cos (DKP); S. appalachia, 19 June-11 July, PUTNAM Co (DCI, JVC), SENECA Co (DKP, DCI), MARION, TRUMBULL Cos (DKP).

MOTHS: Sthenopsis argenteomaculatus, 8 June, HOLMES Co (DVK); Eucosma dorsisignatana, 15 Oct, LICKING Co (RWR); Agriphila vulgiva, 16 Sept, MAHONING Co (RWR); Patelene olyzonaria, 16 Oct, LICKING Co (RWR); Calothyranis amaturlaria, 26 June, HOLMES Co (DVK); Ecliptopera atricolorata, 11 June-13 July, LICKING Co (RWR), CARROLL Co (JAT); Stannodes gibbicostata, 27 Sept, LICKING Co (RWR); Cladara atroliturlata, 22 Apr-9 May, HOLMES Co (RWR), CARROLL Co (JAT); Lacosoma chirodota, 3 June, HOLMES Co (RWR); Phylodesma americana, 9 May, CARROLL Co (JAT); Sphinx chersis, 23 May, CARROLL Co (JAT); Gluphisia lintneri, 18 Apr, ASHTABULA Co, STATE (VFL); Schizura concinna, 28 Aug, HAMILTON Co (DJW); Haploa reversa, 26 June, SCIOTO Co, 2nd Ohio record (VA); Lophocampa maculata, 23 May, MAHONING Co (RWR); Idia majoralis, 7 July, HOLMES Co (RWR); Idia scobialis, 7 July, HOLMES Co (RWR); Chytolita petrealis, 5 June, HOLMES Co (RWR); Macrochilo absorptalis, 14 June, HOLMES Co (DVK); Tetanolita floridana, 7 July, HOLMES Co (RWR); Melanomma auricinctaria, 12 June, PORTAGE Co (LCK); Bomolocha atomaria, 14 June, HOLMES Co (RWR); Zale minerea, 15 May, HOLMES Co (RWR); Zale phaeocapna, 21 Apr, LAWRENCE Co, STATE (DRT); Zale bethunei, 20 Apr, LICKING Co (RWR); Euclidea cuspea, 22 Apr, HOLMES Co (RWR); Catocala judith, 18 Aug, HOLMES Co (RWR); C. miranda, 19 June, VINTON Co, 2nd Ohio record (JWP); C. clintoni, 23 June, LICKING Co (RWR); Plusia contexta, 5 June, PORTAGE Co (LCK); Paectes pygmaea, 7 July, HOLMES Co (RWR); Hyperstrotia secta, 26 May, LICKING Co (RWR); Thioptera nigrofimbria, 14 Aug, LICKING Co (RWR); Bagisara rectifascia, 8 June, HOLMES Co (DVK); Acronicta tristis, Apamea nigrior, 14 June, HOLMES Co (DVK); A. cariosa, 7 June, MAHONING Co (RWR); A. vultuosa, 24 May, GEauga Co (LCK); Oligia exhausta, 24 June, HOLMES Co (RWR); O. obtusa, 13 July, HOLMES Co (DVK), LICKING Co (RWR); Papaipema leucostigma, 20 Sept, ERIE Co, STATE (RAH); Iodopepla u-album, 14 Sept, LICKING Co (RWR); Bellura gortynoides, B. obliqua, 26 May, LICKING Co (RWR); Ipimorpha pleonectusa, 7 Aug, LICKING Co (RWR); Phosphila miseloides, 22 Aug, HOLMES Co (RWR); Magusa orbifera, 15 Oct, LICKING Co (RWR); Stiriodes obtusa, 14-23 June, LICKING Co (RWR), HOLMES Co (DVK); Lithophane patefacta, 16-19 Oct, HOLMES, LICKING Cos (RWR); L. innominata, L. signosa, 16 Oct, LICKING Co (RWR); Copipanolis styracis, 27 March, HOLMES Co (DVK); Leucania inermis, 30 May, LICKING Co (RWR); Tricholita notata, 20 Sept, ERIE Co, STATE (RAH); Euxoa scholastica, 7 July, HOLMES Co (RWR); Euagrotis lubricans, 6 Aug, HOLMES Co (DVK).

INDIANA. Eiler and Shull sent detailed reports. Shull was active from 1 February to 18 November, collecting 76 species of butterflies and 165 species of moths. Visits to Clark, Floyd and Scott Counties resulted in many new county records. Shull stated that this was the worst year for D. plexippus in 50 years collecting, but he observed a very thin migration flying southward on 13 September through Marion, Hamilton, Tipton, Howard, Miami and Wabash Counties.

BUTTERFLIES: E. icelus, 11-12 Apr, FLOYD, SCOTT Cos (DE, ES); E. horatius, 11-12 Apr, Clark, FLOYD Cos (DE, ES); E. baptisiae, 9 Sept, Noble Co (ES); N. therminier, 31 Aug, Brown Co (ES); A. campestris, 12 Sept, MARION Co (ES); P. massasoit, 29 June, Wabash Co (ES); E. dion, 23 June, Wabash Co (ES); E. conspicua, 7 July, Wabash Co (DE); H.

cresphontes, 21 May-23 Sept, Kosciusko, Wabash Cos (ES), LaGRANGE Co (DE); A. virginianensis, 11 Apr, Clark Co, associated with Dentaria laciniata, also found at second site (DE, ES); E. midea, 11-12 Apr, CLARK, FLOYD, SCOTT Cos (DE, ES); C. philodice, 29 Oct, Wabash Co, in copula at 50°F, coldest and LATEST record (ES); E. dorcias, 7 Aug (late), LaGrange Co (DE); S. acadica, 7 July, Wabash Co (DE, ES); S. caryaevorum, 7 July, Wabash Co (ES); I. henrici, 11-25 Apr, SCOTT, Union Cos (DE, ES); E. claudia, 7-27 Aug, LaGrange, Wabash Cos (DE, ES); C. selene, 7 Aug, LaGrange Co (ES); P. progne, 23 Sept, Wabash Co (ES); S. appalachia leewii, 6 June, Kosciusko Co (ES), 7 Aug, LaGrange Co (DE).

MOTHS: Anagoga occiduaris, 1 May, FAYETTE Co, STATE (DE); Citheronia regalis, 6 July, Wabash Co (ES); Ceratomia hageni, 31 May, Wabash Co (ES); Paratreia plebeja, 8 Aug, Union Co (ES); Pachysphinx modesta, 6 June, Kosciusko Co, in copula 1130 h, 78°F (ES); Calyptra canadensis, 8 June, WABASH Co, STATE, larva on Thalictrum revolutum (DE); Catocala cerogama, 5 Aug, Wabash Co (ES); Eumicremma minima, 5 Sept, WABASH Co, STATE (ES); Psychomorpha epimenis, 11-12 Apr, Floyd, Scott Cos (ES).

ILLINOIS. Six reports were received, giving the state good coverage. Wiker reported fairly normal weather in spring and early summer, following a mild winter. Unusually hot and dry conditions began in July. Hess, reporting from west-central Illinois, found P. sennae in record numbers, possibly exceeding the 1974-75 migrations he observed there. It was the most common butterfly in Macomb from late July through August, abundant on garden petunias and zinnias. Pavulaan reported a mass abundance of P. sennae at Eldon Hazlet State Park, Clinton County. Leeuw, reporting on the northeastern counties, found many Z. cesonia in Lake County from late September through early October.

BUTTERFLIES: A. lycaeides, 20 May-3 June, Pope Co (JRW); S. hayhurstii, 30 July, Kankakee Co (SJ); P. communis, 18 July, Carroll Co (GB); E. icelus, 1 May, POPE Co (JRW); E. horatius, 10 July, McDonough Co (DH, YS); E. baptisiae, 28 June-23 July, Winnebago Co (IL), Grundy Co, ovipositing on Baptisia leucantha (JRW); H. phyleus, 23 July-2 Sept, Cook Co (SJ), Grundy Co (JRW); H. ottoe, 26 June-July, Mason Co (JRW), Winnebago Co (IL); P. origenes, 7 June, McDonough Co, on purple coneflower, bluestem hill prairie (acid upland type) (DH, YS); A. arogos, 4-15 July, Mason Co (JRW); P. byssus, 29 June-23 July, Grundy, Mason Cos (JRW), McDonough Co, bluestem hill prairie (DF, YS); P. massasoit, 21 June, Cook Co (IL); P. viator, 27 June-23 July, Cook Co (IL), Grundy Co (JRW); E. dion, 19-24 June, Cook Co (IL), Cass, WINNEBAGO Cos (JRW); E. conspicua, 24 June, Cass Co (JRW); A. hianna, 2-9 May, Mason Co (JRW), Greene Co, on bluestem hill prairie (loess type) (DH); A. hegon, 2 May, Jersey Co, around wet, grassy seep (DH); B. philenor, 2 May-11 Oct, Greene, McDonough Cos, common (DH); H. cresphontes, 17 May-4 Sept, McHenry Co (IL), McDonough, WARREN Cos (DH); P. protodice, 13 June-3 Nov, Carroll Co (GB), Mason, McDonough Cos (DH); E. olympia, 9 May, Lake Co (IL); Z. cesonia, 12 Aug-5 Sept, Kankakee Co (SJ), Lake Co, form rosa, in copula 5 Sept (IL); P. sennae, 2 May-4 Nov, Clinton Co (HP), LaSalle Co (SJ), Mason Co (DH, JRW), Brown, Champaign, Fulton, Greene, Hancock, McDonough, Schuyler, WARREN Cos (DH); E. lisa, 3 July-15 Oct, Kankakee Co (SJ), Lake Co (IL), Mason, McDonough, Warren Cos (DH); E. nicippe, 2 Aug, Menard Co (JRW); N. iole, 29 Aug-15 Oct, Brown, Mason Cos (DH), Will Co (SJ); S. edwardsii & S. liparops strigosum, 12 June, Menard Co (JRW); M. gryneus, 1 May, Pope Co, common (JRW); S. melinus humuli, 10 July-4 Oct, McDonough Co (DF, YS), Lake Co (IL); H. isola, 20 June-15 July, Mason Co (JRW), Winnebago Co, breeding colony seen 4 July (IL); L. bachmanii, 30 July-15 Oct, Kankakee Co (SJ), Mason Co (DH); E. claudia, 13-23 Sept, McDonough Co (DH); S. idalia, June-Aug, Mason Co, strong numbers (JRW); J. coenia, 26 Sept, Lake Co (IL); A. andria, 2 May, Jersey Co (DH).

MOTHS: Paranthrene dollii, 31 May, Lake Co (IL); P. simulans, 7 June, McHenry Co (IL); Sibine stimulea, June to early July, Hancock, McDonough Cos, unusually abundant (YS); Catocala serena, 1 Sept, McHenry Co (IL); Acontia lactipennis, 18 July, Carroll Co (GB); Schinia arcigera, 26 Sept, Lake Co (IL); S. florida, 23 July, Cook Co, larvae on Oenothera biennis, 13 Aug (IL); S. gaurae, 9 Aug, Kane Co, larvae on Gaura biennis; Larvae of both S. florida and S. gaurae found within Chicago city limits (IL); S. lucens, 12 June, Mason Co (JRW).

IOWA. Seven reports were submitted, providing excellent coverage for the state. Schlicht and Nekola found 1987 to be a good butterfly year, possibly due to the mild winter. Mouw reported a very early spring, with dry weather in the early summer, but he had poor luck with the moths. Western Iowa was well-represented, with detailed reports from the Omaha contingent, Bray, Padelford and Weber. P. sennae was unusually abundant in their area. Records from the northwestern counties were provided by Orwig. Scholtens sent a note on P. sennae, which he collected in Madison County, but observed in many counties across southern Iowa during late August.

BUTTERFLIES: T. bathyllus, 9 May-15 Aug, Harrison, Jefferson Cos (JCN), Lee, Louisa Cos (DWS); S. hayhurstii, 10 July-7 Sept, Louisa Co (JCN), Pottawattamie Co (TB, BP); E. brizo, 2 May, Lee, Van Buren Cos (DWS); E. horatius & E. martialis, 16 July, Lee Co (DWS); E. lucilius, 26 Apr-12 July, Allamakee, Jones Cos (JCN), Clinton Co (G. Selby); E. baptisiae, 29 June-7 July, Winneshiek Co (JCN); P. communis, 1 July-15 Aug, Fremont, Harrison, Mills Cos (TB, BP); H. ottoe, 18 June-7 July, Allamakee Co, 12 sites (J. Nehnevaj), Clinton Co (G. Selby), Woodbury Co (TTO); P. origenes, 19 June-26 July, Louisa Co (DWS), Jones Co (JCN), LUCAS Co (TTO); P. verna, 21 June-3 July, Cerro Gordo Co (DWS), LYON Co (TTO); E. dion, 22-23 June, Franklin, Mitchell Cos (JCN); E. conspicua, 22 June-5 July, Cedar, Franklin, Mitchell, Winneshiek Cos (JCN); A. hianna, 14-25 May, Allamakee Co (JCN), WOODBURY Co (TTO); A. hegon, 14 May, Allamakee Co (JCN); L. eufala, 13 Sept, Woodbury Co (TTO); B. philenor, 2 May, Lee Co, last recorded in 1956 (DWS); P. protodice, 13 Aug, Fremont Co (TB, BP); Z. cesonia, 11 June-9 July, Fremont, Harrison, Mills Cos (TB, BP); P. sennae, 1 July-13 Sept, Fremont, Harrison, Pottawattamie Cos (TB, BP), Madison Co (BS), Woodbury Co (TTO); E. lisa, 1 July-30 Sept, Fremont, Harrison, Pottawattamie Cos (TB, BP, JW), LUCAS, Woodbury Cos (TTO); F. tarquinius, 25 Apr-27 June, Allamakee, Muscatine Cos (JCN), Pottawattamie Co (BP, JW); G. xanthoides, 9 July, Mills Co (TB); S. caryaevorum (det K. Johnson), 25 June-31 Aug 1986, Allamakee Co (DWS, JCN), Clayton Co (DWS), Fayette & Jones Cos (JCN), 22 July 1978, Linn Co (DWS); S. liparops strigosum, 26 June, Clayton Co (DWS); M. gryneus, 27 Apr-9 May, 27 June-17 July, Clinton Co (G. Selby), Fremont & Pottawattamie Cos (TB, BP), Harrison Co (JW), Linn Co (DWS), Fayette Co (DWS, JCN), Benton, Jones, Louisa, and Muscatine Cos (JCN); H. isola, 28 May-13 Aug, Allamakee, Fayette, Monona, Winneshiek Cos (JCN), Jackson Co (J. Pooler), Fremont, Mills, and Pottawattamie Cos (TB, BP); S. idalia, 28 May (early)-9 July, Louisa Co (JCN) and Mills Co (TB); E. phaeton phaeton, 3 July, Cerro Gordo Co (DWS, JCN); E. phaeton ozarkae, 20 June, Lee Co (B. Cecil); N. vau-album, 16 June, Allamakee Co (JCN); A. milberti, 6 June, Winneshiek Co (JCN); S. eurydice fumosa, 23 June-2 July, Benton Co (DWS, JCN), Franklin Co (JCN).

MOTHS: Manduca sexta, 25 Sept, Ceratomia catalpae, 25 Apr, Eumorpha pandorus, 18 July, Catocala residua, 22 July, C. resecta, 7 Aug, C. cerogama, 16 July, Hardin Co (JM).

MINNESOTA. Only three reports were received. Dana sent some interesting new records and Scott provided a list of species from Freeborn Co. Weber, reporting mainly for Hubbard County, sent a detailed report, including many records of nectar sources utilized.

BUTTERFLIES: O. garita, 4-5 June, KITTSON Co, second state record, found on two dry prairie sites and appears to be a permanent resident (RD); H. dacotae, 5 June (early), Pope Co, second county record, but found at new site on steeply rolling prairie (RD); P. verna, 26 June, E. dion, 22-26 June, and E. conspicua, 25-26 June, Freeborn Co (JS); A. hegon, 14 May, Hubbard Co (JW); A. napi, mid-June, Sherburne Co, second brood abundant (RD), 16 May and 20 June-25

July. Cass. Hubbard Cos. nectaring on dandelion, wood violet and *Lespedeza* (JW); *G. xanthoides*, *H. isola*, 20 July, Hubbard Co (JW); *G. lygdamus*, 14 May, Hubbard Co. nectaring on wild strawberry (JW); *C. inornata*, 17 June, Hubbard Co. nectaring on oxeye daisy (JW).

WISCONSIN. Ten reports were contributed, providing quite good coverage for most parts of the state. Balogh sent data from Grant and Vilas Counties. Borkin, also reporting for others, covered the Milwaukee area. Ferge experienced a very productive season, collecting mainly in southwestern Wisconsin. Parkinson reported from widely scattered counties and Swengel provided a detailed account of butterflies from several areas. Combs, Hoffman, Leeuw, Reese and Schultz reported on a number of interesting species. The season was preceded by an unusually mild winter, with well below-average snowfall. An early onset of warmer weather caused many spring-emerging species to appear at least two weeks ahead of "normal", nearly duplicating the onset of last season. Spring-emerging Noctuidae were out before mid-April in the northern counties. Summer was generally hot, with some areas being drier than usual. The onset of autumn seemed advanced also, with frosts occurring in early October in southern Wisconsin. The most outstanding aspect of this season was the appearance of many southern migrant butterfly species, greatly exceeding last year's influx. *P. sennae* arrived early in the season, with many seen moving northward along the Mississippi River on June 28th. Northward movement was still occurring in Crawford County on August 2nd, but a small population persisted there through early September in a locality with abundant Partridge Pea. Other migrants present in large numbers were *Z. cesonia*, *E. lisa* and *N. iole*, which were found as late as 27 September, just days before frost curtailed the butterfly season.

BUTTERFLIES: *E. baptisiae*, 22 Aug-5 Sept, CRAWFORD, VERNON Cos (LF, JP), locally abundant, ovipositing on *Coronilla varia*, 22 Aug (LF); *E. persius*, 16-30 May, JACKSON, Juneau, Monroe Cos (LF); *P. communis*, 18 July-4 Sept, Crawford Co (LF), Grant & Sauk Cos (AS), WAUSHARA Co (D. Bray via MR), Winnebago Co (CS); *T. lineola*, 7 June-14 July, ASHLAND & Ozaukee Cos (JP), BAYFIELD Co (JP, AS), FOREST Co (LF), Winnebago Co (CS); *H. phyleus*, 27 Sept, CRAWFORD Co (LF); *H. ottoe*, 27-29 June, Grant Co (GB, LF, JP), Sauk Co (LF); *H. leonardus/pawnee* (intergrades), 18 Aug-6 Sept, Grant, Sauk Cos (LF), Green Co (JP, IL); *H. metee*, 2-9 May, SAUK Co, two localities (LF, AS); *H. sassacus*, 23-31 May, Burnett Co (JP), SAUK Co, (LF); *P. byssus*, 28 June, Grant Co (GB, LF); *A. hianna*, 15-23 May, Burnett, Eau Claire Cos (JP), MONROE Co (CF), JACKSON, SAUK Cos (LF); *A. hegon*, 24 May, Marathon Co (JP); *H. cresphontes*, 17 May-27 Sept (very long season), Crawford Co (CF, LF), Grant Co (JP, LF), Green Co (IL), Sauk Co (AS); *Z. cesonia*, 27 June-27 Sept, many seen, pair in copula on 25 July, Columbia Co (RH), Crawford, Trempealeau Cos (LF), Grant Co (CF, LF, JP, AS); *P. sennae*, 28 June-13 Sept, CRAWFORD Co (LF, JP), Grant Co (GB, LF, JP), nectaring on Bouncing Bet, 28 June (LF), WAUSHARA Co (D. Bray via MR); *E. lisa*, 28 May-27 Sept (long season), CRAWFORD Co (CF, LF, JP), Dodge Co (AS), Grant Co (LF, JP), ovipositing on *Cassia* sp., 27 June (GB), Juneau Co (LF), OUTAGAMIE, SHAWANO Cos (RC), PRICE, Sauk Cos (AS), Trempealeau, VERNON Cos (LF), WAUKESHA Co (R. Sullivan via SB); *Eurema nicippe*, 31 May, Dane Co (RC); *N. iole*, 15 Aug-27 Sept, CRAWFORD Co (CF, LF, JP), Iowa Co (AS), Sauk Co (LF, AS), WAUSHARA Co (D. Bray via MR); *G. xanthoides dione*, 16 June-15 July, BAYFIELD Co (AS), Grant Co (LF), WAUKESHA Co (R. Sullivan via SB); *E. helloides*, 1 July, Vilas Co (GB); *M. gryneus*, 16 May and 27 June-18 July, Grant Co (GB, JP), Sauk Co (AS, LF), Pierce, Trempealeau Cos, nectaring on white sweet clover (RH); *I. irus*, 9-16 May, Adams Co (JP), MONROE Co (LF); *I. henrici*, 26 Apr-23 May, Burnett Co (JP), SHAWANO Co (RC), WAUSHARA Co (MR); *H. isola*, 14 June-1 Sept, BAYFIELD Co (AS), Grant Co (JP, AS), SAUK Co (AS), WAUKESHA Co (R. Sullivan via SB); *G. lygdamus couperi*, 12 Apr-31 May, Adams, Burnett Cos (JP), Eau Claire Co (CF), Winnebago Co, ovipositing on *Lathyrus venosus* (CS); *L. melissa samuelis*, 16-23 May, Eau Claire, Jackson, Monroe Cos (CF, LF, JP); *P. saepiolus*, 19-23 June, Bayfield Co (AS, JP); *C. muticum*, 27 June, MARINETTE Co (RC); *L. bachmanii*, 12-21 July, Grant Co (AS), Winnebago Co (CS); *N. vau-album*, 8 March, 7 July, Sauk Co (AS); *J. coenia*, 26 July-27 Sept, CRAWFORD Co (CF, LF), Grant, Sauk Cos (AS), Winnebago Co (CS); *E. claudia*, 8 July-27 Sept, Grant Co (LF, AS), JACKSON Co (AS); *S. idalia*, 20 June-30 Aug, Green Co (JP), mating and oviposition observed 9-21 July (RH), Sauk Co (LF), OZAUKEE Co (SB); *C. frigga*, 16-30 May, ASHLAND Co (AS), Langlade Co (JP), Vilas Co (GB); *P. batesii*, 11 Aug, Waukesha Co (R. Sullivan via SB); *C. gorgone*, 8 May-27 Sept (long season), CRAWFORD Co (CF, LF, JP), Green Co (JP), MONROE Co (CF, LF), Sauk Co (AS), Winnebago Co (CS); *C. harrisii*, 7 June, LINCOLN Co (LF), Marathon Co (JP); *C. inornata*, 19 June-15 July, Bayfield Co (AS, JP), Iron Co (JP), Vilas Co (GB); *O. chryxus strigulosus*, 16 May, Langlade Co (JP); *O. jutta ascerta*, 16-30 May (early), Ashland, Price Cos (AS), Langlade Co (JP), Oneida, Vilas Cos (GB).

MOTHS: *Crambus alienellus labradoriensis*, 30 May, Oneida, Vilas Cos, in bogs (GB); *Archiearus infans*, 8-24 March (early), Bayfield, Sauk Cos (AS); *Euchlaena milnei*, 27-29 June, Grant Co (GB); *Scopula cacuminaria*, 1 July, Vilas Co (GB); *Heteropacha rileyana*, 29 Aug, Grant Co (JP); *Eacles imperialis*, 27 June (early), Grant Co (JP); *Manduca sexta*, 11 Sept, Iowa Co, nectaring on Bouncing Bet (LF); *Eumorphia pandorus*, 13 June, Ozaukee Co (JP); *Deidamia inscripta*, 18 April, TREMPLEAU Co (JP); *Notodonta simplaria*, *Dasylophia anguina*, 1 Aug, TREMPLEAU Co (LF); *Crambidia casta*, 23 Sept, SAUK Co (LF); *Haploa reversa*, emerged 30 June, Sauk Co, larvae eating *Lithospermum carolinense* flowers (LF); *Arctia caja*, 24-25 July, RUSK Co (LF), 20 at UV, VILAS Co (JP); *Apantesis carlotta*, 18 July-18 Aug, SAUK Co (LF); *Grammia phyllira*, 29 May-3 Aug, SAUK Co (LF); *Grammia oithona*, 29 May-5 Sept, SAUK Co (LF); *Cycnia inopinatus*, emerged 20-24 July, Grant Co, larvae found eating *Asclepias tuberosa* flowers 27 June (GB); *Macrochilo bivittata*, 25 July, RUSK Co (LF); *M. louisiana*, 1 July, Vilas Co (GB); *Phytometra ernestiana*, 9 May, 3 Aug, SAUK Co, STATE (LF); *Ledaea perditalis*, 1 Aug, TREMPLEAU Co (LF); *Metalectra discalis*, 29 Aug, Grant Co (LF); *Cissusa spadix*, 18 Apr, Trempealeau Co (JP); *Mocis texana*, *Catocala obscura*, 1 Aug, TREMPLEAU Co (LF); *C. abbreviatella*, 27-29 June, Grant Co (GB, LF, JP); new locality, Sauk Co (LF); *C. nuptialis*, 1 Aug, Trempealeau Co (LF, JP); *C. whitneyi*, 27 June (early), SAUK Co (LF); *Abrostola ovalis*, 29 May, TREMPLEAU Co (LF); *Syngrapha viridisigma*, 25 July, Vilas Co (JP); *Oruza albocostaliata*, 28 June, GRANT Co, STATE (GB); *Tarachidia binocula*, 9 May-29 June, Grant Co (GB), SAUK Co (LF); *Acronicta betulae*, 1 Aug, TREMPLEAU Co (LF); *Psychomorpha epimenis*, 17 Apr, Sauk Co (AS); *Crymodes burgessi*, 5 Sept, SAUK Co (LF); *C. relicina*, 29 Aug-23 Sept, Grant and SAUK Cos (LF); *Oligia bridghami*, 26 June, Waukesha Co (JP); *Archanara laeta*, 1 Aug, Trempealeau Co (LF); *Papaipema sciata*, 11-23 Sept, Iowa Co (LF); *Hydroecia stramentosa*, 1 Aug, Trempealeau Co (LF); *Fagiana littera*, 12 June, Ozaukee Co (JP, LF); *Magasa orbifera*, 12-28 June (early), Grant, Ozaukee Cos (LF), large number of larvae defoliating Buckthorn in Jackson Co in early July (D. Hall and P. Pellitteri); *Plagiomimicus pityochromus*, 1 Aug, Trempealeau Co (LF); *Brachylomia algens*, 15 Aug, Oneida Co (LF); *Feralia jocosus*, *F. major*, *Brachionycha borealis*, 13 Apr, Marathon Co (JP); *Faronta rubripennis*, 31 July-3 Aug, SAUK, Trempealeau Cos (LF); *Eucrocnemis fimbriaris*, 23 Sept, Sauk Co (LF); *Loxagrotis groteti*, 29 Aug, Grant Co (LF); *Heliothis subflexus*, 1 Aug, TREMPLEAU Co (LF); *H. borealis*, 9 May, Adams Co (JP); *Schinia indiana*, 23 May, Eau Claire Co, resting on *Phlox pilosa* (CF, LF); *S. septentrionalis*, 30 Aug-6 Sept, Green Co, on *Liatris* and *Aster* flowers (LF, IL, JP); *S. trifascia*, 1-29 Aug, Grant, TREMPLEAU Cos (LF); *S. florida*, 27 June, SAUK Co (LF); *S. lucens*, 13-28 June (early), Grant Co (GB, LF, JP), SAUK Co, on *Amorpha canescens* flowers and at UV (LF).

MICHIGAN. Detailed reports were received from both Balogh and Nielsen, providing coverage of many parts of the state. Nielsen, also reporting for several other collectors, noted above normal spring temperatures and an extremely hot and dry summer, extending well into September. October was colder and wetter than normal. Spring-emerging Lycaenidae and Noctuidae were already out in most regions by mid-April; most early species being on the wing 10-14 days before usual.

On 18 April, 41 Noctuid species were collected at UV in Otsego County, one of the best evenings for that northern location! Catocala were up, especially in the southern counties, with a record 38 species taken, mostly at UV/MV lights. Many southern species were collected throughout the state, with *E. claudia* and *M. orbifera* especially noticeable. Monarch numbers were down and no migrational activities were reported. The Gypsy Moth continued to increase in numbers in mid-Michigan.

BUTTERFLIES: *E. baptisiae*, 11 July, Monroe Co (GB); *E. persius*, 9 May, ST. JOSEPH Co (MCN); *P. centaureae wyandot*, 9-17 May, Montcalm Co (GB), Otsego Co (MCN); *H. phyleus*, 26 Sept, BERRIEN Co (JB); *H. comma laurentina*, 5 Sept, Drummond Is, Chippewa Co (GB); *H. metea*, Montcalm, Newago Cos (GB); *P. coras* & *P. themistocles*, 4 Oct (late), Monroe Co (MCN); *A. hegon*, 25 May-12 June, BARAGA, CASS, LUCE Cos (MCN, WW); *P. protodice*, 21 Aug, Otsego Co, first in many years (TH, MCN); *A. napi*, 21 Apr, Kalamazoo Co (GB); *A. virginienensis*, 26 Apr-24 May, CASS, Kalamazoo Cos (GB); *P. sennae*, 27-31 May, EATON Co (RF); *F. tarquinius*, 17 May (early), Otsego Co (MCN); *I. irus*, 25 April (early), Allegan Co (JB, TH, MCN), Kalamazoo Co (GB); *I. henrici*, 29 May, Schoolcraft Co (GB); *I. nippon clarki*, 19 April (early), Otsego Co (MCN); *S. melinus humuli*, 17 May, OTSEGO Co (MCN); *G. lygdamus couperi*, 9 May, CASS Co (MCN); *L. idas nabokovi*, 3-8 June (early), Alger Co (MCN); *L. melissa samuelis*, 24 May, Montcalm Co, larvae on *Lupinus perennis*, 25 Apr (TH, HK, MCN); *E. claudia*, 6 June-26 Sept, Berrien, EATON, Keeweenaw Cos (JB, RF, JAS); *P. eunomia dawsoni*, 2-8 June, BARAGA, Chippewa, Mackinac Cos, nectaring on Labrador Tea (MCN, JWP, JAS); *C. frigga*, 28 May-7 June, Baraga, Keeweenaw Cos (MCN, JWP, JAS), Schoolcraft Co (GB), nectaring on Bog Rosemary and Labrador Tea, ovipositing on Rosemary and Cranberry (MCN); *E. discoidalis*, 8 May (early), IRON Co (J. Perona); *O. chryxus strigulosa*, 8-29 May, Dickinson, Otsego Cos (GB, MCN, J. Perona), nectaring on Japanese Cherry and Wild Strawberry (MCN), Montcalm, Newago Cos (GB); *O. jutta ascerta*, 25 May-6 June, Baraga, Chippewa, Keeweenaw, Luce & Mackinac Cos (MCN, JWP, JAS), Dickinson, Schoolcraft Cos (GB), ovipositing on Tamarack and dead Jack Pine (MCN).

MOTHS: *Adela purpurea*, 21 Apr, Kalamazoo Co, at willow blossoms (GB); *Synanthedon fatifera*, 21 June-2 July, CLINTON Co, STATE (WT); *S. viburni*, 8 June, CLINTON Co, STATE (WT); *S. pyri*, 2-11 July, CLINTON Co, STATE (WT); *S. rubrofascia*, 4 July-7 Aug, BARRY, CASS, VAN BUREN Cos, STATE (WT, WW); *S. decipiens*, 25 June-8 July, LIVINGSTON Co, STATE (WT); *Carmanta bassiformis*, 2 June 1970, OAKLAND Co, STATE (J. Newman); the six preceding Sesiid species det by Dr. Thomas Eichlin; *Pyrausta laticlavata*, 7 Aug, dunes, Muskegon Co (GB); *Crambus alienellus labradorensis*, 29-31 May, Dickinson, Schoolcraft Cos, in bogs (GB); *Loxocrambus awemensis*, 7 Aug, dunes, Muskegon Co (GB); *Lobocleta ossularia*, 31 July, CASS Co, STATE (GB); *L. plemyraria*, 1 Aug, Allegan Co (GB); *Idaea eremiatia*, 5 June, Montcalm Co (GB); *Scopula cacuminaria*, 13 June, 31 July, 11 Sept, Cass Co (GB); *Thera contracta*, 5-6 Sept, Drummond Is, Chippewa Co (GB); *Lacosoma chiridota*, 12 June, Barry Co (GB); *Eacles imperialis*, 18 July, BARRY Co (TH); *Hemileuca maia*, 4 Oct, Monroe Co (MCN); *Hemileuca* sp., larvae on Dwarf Birch, LUCE Co (TH, HK); *Hyalophora columbia*, Otsego Co, live cocoon on Tamarack, 21 Aug (TH); *Ceratomia hageni*, 18 Aug, Cass Co (WW); *Sphinx luscitiosa*, 15-30 May, Otsego Co (MCN); *Hemaris gracilis*, 29 May, Schoolcraft Co (GB); *Pagura simplex*, 9 May, CASS Co, STATE (WW); *Spilosoma dubia*, 6 June, KEWEENAW Co (MCN); *Platartia parthenos*, 4 July, Schoolcraft Co, common at UV on very cold night in bog (GB); *Apantes carlotta*, 13 June, 31 July, 11 Sept, CASS Co, STATE (GB); *Grammia phyllira*, 5 June, Montcalm Co (GB); *Macrochilo louisiana*, 13 June, Cass Co (GB); *M. hypocritalis*, 12 June, BARRY Co, STATE (CB); *Mocis latipes*, 3 Nov, Kalamazoo Co (GB); *Catocala dejecta*, 18 July-1 Aug, BARRY Co (TH, HK, MCN); *C. amestris*, 18-31 July, Barry Co (JB, TH, HK, MCN), larvae on *Amorpha canescens* (JB); *C. gracilis*, 24 July-1 Aug, BARRY Co (TH, HK, MCN); *C. alabamiae* (det by E. Quinter), 25 July, BARRY Co, 22 July 1970, ST. JOSEPH Co, STATE (MCN); *C. micronympha*, 1 Aug, BARRY Co, STATE (MCN); *Syngrapha altera* (det by T. Eichlin), 20 Aug 1986, CHIPPEWA Co (MCN); *Autographa biloba*, 6 June, KEWEENAW Co (MCN); *Homophoberia cristata*, 13 June, 31 July, Cass Co (GB); *Cerma cora*, 16 May, Otsego Co (MCN); *Spraguea leo*, 31 July, common, Cass Co (GB); *Luperina stipata*, 31 July, Cass Co (GB); *Lemmeria digitalis*, 6 Sept, Drummond Is, Chippewa Co (GB); *Spartinipha inops*, 11 Sept, Cass Co (GB, MCN); *Archana laeta*, 31 July, Cass Co (GB); *Papaipema cerina*, 11-27 Sept, Cass Co (GB, JB, MCN); *P. circumlucens*, 13 June, Lenawee Co, larvae in Wild Hop galls (MCN); *P. maritima*, 26 Sept, BERRIEN Co, larvae in *Helianthus giganteus* galls, & 8 Aug, ST. JOSEPH Co (MCN); *P. limpida*, 27 Sept, Berrien Co (IL); *P. beeriana* fm *laciniariae*, 5 Sept, Otsego Co (MCN); *Magusa orbifera*, 31 July-3 Nov, Kalamazoo, Muskegon Cos (GB), BARRY, St. Joseph Cos (MCN); *Lithophane lepida*, 18 Apr, OTSEGO Co, STATE (MCN); *L. baileyi*, *L. thaxteri*, 18 Apr, 16 Nov, Otsego Co (MCN); *Epiglaea apiata*, 19 Sept, ST. JOSEPH Co (MCN); *Feralia jocosus*, *F. major*, *Brachionycha borealis*, 18 Apr, Otsego Co, (JB, MCN); *Melanchnra pulverulenta*, *Lacanobia rugosa*, 30 May, OTSEGO Co (MCN); *Egira alternans*, 8-9 May, Montcalm Co (GB); *Eucrotopnemis tripars*, 19 Sept, ST. JOSEPH Co (MCN); *Metalepsis fishii*, 18 Apr-16 May, Otsego Co (MCN); *Pyrrhia exprimens*, 29 May-25 July, BARRY, Otsego Cos (MCN); *Eutricopis nexilis*, 16 May, Otsego Co, taken by Crab Spider on *Antennaria* (MCN); *Schinia indiana*, 24 May, Montcalm Co, on *Phlox pilosa* blossom (MCN).

ZONE 9 SOUTHEAST: ALABAMA, FLORIDA, GEORGIA, MISSISSIPPI, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA, BERMUDA. Coordinator: Andrew F. Beck (AFB). Few collectors submitted reports this season, although a few individuals submitted extensive records for infrequently collected areas. The vast majority of data was received from persons who collected while visiting the southeastern states: most resident collectors seemed to have taken the year off! The season in northern Florida began with an extremely wet, cool latter half of winter and advanced into a dry spring and summer. ME reports poor collecting in parts of Tennessee for similar reasons, and MRB reports the same for Georgia. We would like to welcome our new contributors aboard and to plug the Day Butterfly Center, recently opened at Callaway Gardens, Pine Mountain, GA. This season's contributors are as follows: Michael Benton (MRB), Terry Dickel (TSD), David Eiler (DLE), Frank Elia (FCE), Mecky Furr (MF), Phil Kean (PK), Babs Padelford (BP), C. E. Schildknecht (CES), David and Dana Shaw (DDS), Stephen Spomer (SMS), Richard Ullrich (RDU) and Charles Watson, Jr. (CNW). Some reports reached us via Dave Winter (WV), and some records were determined by Doug Ferguson (DCF), Ron Hodges (RWH), Marc Minno (MM), and H. H. Neunzig (HNN). All dates are 1987 unless indicated otherwise. Abbreviations: Co = County, CR = Country road, Det = Determined by, Exptl = Experimental, For = Forest, Hwy = highway, mi = miles, Mt = Mountain, nr = near, Pk = Park, sp = species, SR = State road, St = State.

ALABAMA. BUTTERFLIES: (all records DLE, 25 Mar 86) *P. glaucus*, CR-55, 3.8 mi W of Oaklevel, Cleburne Co; CR-55, 3.8 mi E of SR-9, Calhoun Co. *E. marcellus*, CR-55, 3.8 mi E of SR-9, Calhoun Co. *F. midea annickae*, nr Piedmont, Calhoun Co. *Z. cesonia*, Talladega Natl For, Calhoun Co. *E. comyntas*, Talladega Natl For, Calhoun Co; CR-55, 3.8 mi W of Oaklevel, Cleburne Co. *C. ladon*, Talladega Natl For, Calhoun Co; CR-55, 3.8 mi W of Oaklevel, Cleburne Co. *C. gemma*, CR-55, 3.8 mi E of SR-9, Calhoun Co. *H. sosybius*, CR-55, 3.8 mi E of SR-9, Calhoun Co.

FLORIDA. BUTTERFLIES: *P. vibex* (29 Aug) & *C. ethlius*, Putnam Co, 29 Aug, 29 Sep (BP). *P. aristodemus ponceanus* & *P. andraemon bonhoti*, upper Key Largo, Monroe Co, 14 Jun, several of both seen (DDS). *C. virginienensis*, Rt 84, 5 mi E of Big Cypress Natl Preserve, Collier Co, 2 Jan, EARLY (DDS). *B. archippus*, Putnam Co, 29 Sep (BP). *E. tatila*, Key

Largo, Monroe Co, 14 Jun, common, EARLY (DDS). *H. sosybius*, Putnam Co, 17, 26 Sep (BP).

MOTHS: *Diphthera festiva*, Putnam Co, 28 Aug (BP). The following UNITED STATES records were reported by TSD. *Ethmia submissa* (Oecophoridae:Ethmiinae), No Name Key, MONROE Co, 1, 30 Mar, det RWH; *Anypsis univittella* (Pyralidae:Phycitinae), Torreya State Park, LIBERTY Co, 5 Apr 83, det HHN; *Stylopalia lungerella* (Pyralidae:Phycitinae), Upper Key Largo, MONROE Co, 15 Mar 85, det HHN; *Callopietria jamaicensis* (Noctuidae:Amphipyridae), No Name Key, MONROE Co, 1 Mar, det DCF; *Spodoptera androgea* (Noctuidae:Amphipyridae), No Name Key, MONROE Co, 19 Mar, det DCF.

GEORGIA. BUTTERFLIES: *A. lyciades*, Callaway Gardens, Harris Co, HOST PLANT, *Clitoria mariana* (FCE). *E. brizo*, 5 mi NW of Villanow, Walker Co, 31 Mar 86; Lake Oconee, Greene Co, 29 Mar 86; Snake Creek Gap, Gordon Co, 31 Mar 86. *E. juvenalis*, 5 mi NW of Villanow, Walker Co, 31 Mar 86; nr Lake Oconee, Greene Co, 29 Mar 86; nr I-75 Resaca exit, Gordon Co, 31 Mar 86; Stone Mt Pk, DeKalb Co, 26, 27 Mar 86; nr Rutledge, Newton Co, 29 Mar 86. *E. horatius* & *E. baptisiae*, Snake Creek Gap, Gordon Co, 31 Mar 86. *P. communis*, Decatur, DeKalb Co, 26 Nov 86. *L. accius*, Decatur, DeKalb Co, 26 Nov 86. *F. midea annickae*, 5 mi NW of Villanow, Walker Co, 31 Mar 86; Lake Oconee, Greene Co, 29 Mar 86; Snake Creek Gap, Gordon Co, 31 Mar 86 (all DLE); Lilburn, Gwinnett Co, 28 Mar, 9, 10 Apr. *P. lisa*, Lilburn, Gwinnett Co, 30 Aug (both RDU). *A. nicippe*, Hwy 80, Bulloch Co, 21 Sep, attracted to light (MRB); Decatur, DeKalb Co, 26 Nov 86, LATE (DLE). *H. t. mopsus*, Lilburn, Gwinnett Co, 21 Jun (RDU). *I. henrici*, nr I-75 exit to Resaca, Gordon Co, 31 Mar 86; nr Trenton, Dade Co, 31 Mar 86 (both DLE). *I. niphon*, Lilburn, Gwinnett Co, 17 May. *P. interrogationis*, Lilburn, Gwinnett Co, 9 May, 18 Oct. *P. comma*, Lilburn, Gwinnett Co, 28 Jun. *P. faunus smithii*, Cooper Creek, Union Co, 27 Jun. *N. antiopa*, Lilburn, Gwinnett Co, 25, 30 May. *S. diana*, Cooper Creek, Union Co, 27 Jun, 11 Jul. *C. nycteis*, Lilburn, Gwinnett Co, 9 May (all RDU). *B. a. asryanax*, Gate Road, Glynn Co, 30 May to 12 Jun, reared on *Salix* sp (MRB). *A. celtis*, Lilburn, Gwinnett Co, 6 Jun, 23 Aug. *S. eurydice*, Cooper Creek, Union Co, 27 Jun (both RDU). *C. gemma*, US 278, 3 mi W of Oconee River Bridge, Greene Co, 29 Mar 86 (DLE). *H. sosybius*, Lilburn, Gwinnett Co, 26 Apr, 10 Sep (RDU).

MOTHS: *Spoladea recurvalis*, Glen Lake Pk, Decatur, DeKalb Co, 26 Nov 86, LATE; *Anacamptodes defectoria* (melanic) & *Epimicis hortaria*, Stone Mt Pk, DeKalb Co, 27 Mar 86; *Metarranthis obfirmaria*, Lake Oconee, Greene Co, 29 Mar 86; *Probole alienaria*, Stone Mt Pk, DeKalb Co, 27 Mar 86; *Eutrapela clemataria*, Stone Mt Pk, DeKalb Co, 25 Mar 86 (all DLE); *Citheronia regalis*, Hwy 80, Bulloch Co, 30 May; *C. sepulcralis*, GA Southern Campus, Bulloch Co, 17-30 May; *Manduca sexta*, Hwy 80, Bulloch Co, Apr-Aug; *M. rustica*, *Xylophanes tersa* & *Hyles lineata*, Hwy 80, Bulloch Co, Apr-Aug (all MRB); *Symmerista albifrons*, Stone Mt Pk, DeKalb Co, 27 Mar 86 (DLE); *Epantheria scribonia*, Hwy 80, Bulloch Co, 18 May to 2 June, very abundant; *Apantesis placentia*, GA Southern Campus, Bulloch Co, 24 Sep (both MRB); *Hypsoropha monilis*, Lake Oconee, Greene Co, 29 Mar 86; *Panopoda rufimargo* & *Leucania scirpicola*, Stone Mt Pk, DeKalb Co, 27 Mar 86 (DLE).

MISSISSIPPI. BUTTERFLIES: *I. niphon*, nr Ellisville, Jones Co, 20 Apr (SMS).

NORTH CAROLINA. BUTTERFLIES: *E. bimacula*, nr Corapeake, Gates Co, 25 Jul abundant (PK via WDW). *A. hianna*, Clemson Exptl For, PICKENS Co, 9 May. *A. hegon*, Clemson Exptl For, ANDERSON Co, 9 May, 23 Sep. *A. aesculapius*, Clemson Exptl For, Pickens Co, 9 May, 30 Aug; ANDERSON Co, 9 May, 23 Sep. *A. reversa*, Clemson Exptl For, PICKENS Co, 24 May, 22 Aug. *A. celia belli*, Clemson Exptl For, Pickens Co, 22 Jul, 8 Aug. *H. t. mopsus*, Clemson Exptl For, Pickens Co, 7 Jun. *S. liparops*, Clemson Exptl For, PICKENS Co, 24 May. *I. niphon*, Clemson Exptl For, PICKENS Co, 9 May. *C. gorgone*, Clemson Exptl For, Pickens Co, 9 May. *E. creola*, Clemson Exptl For, Pickens Co, 7 Jun, 22 Aug. *S. appalachia*, Clemson Exptl For, Anderson Co, 25 Aug (all QW).

SOUTH CAROLINA. MOTHS: *Prionoxystus robiniae* & *Dolba hyloeus*, Wedge Plantation, Berkeley Co, 15 May (MRB).

TENNESSEE. BUTTERFLIES: *W. otho*, Kingsport, SULLIVAN Co, 15 Aug (QW). *A. virginianensis*, nr Evins Mill, DeKalb Co, 12 Apr, common; near Frozen Head, Morgan Co, 13 Apr, common (both MF). *F. midea annickae*, Cedars of Lebanon St Pk, Wilson Co, 24 Mar 86; Westmoreland, Sumner Co, 1 Apr 86 (both DLE); Wolf River area, Shelby Co, 25 Mar, 8 Apr, common (MF). *Z. cesonia*, Germantown, Shelby Co, 8 Oct (MF). *P. sennae*, Kingsport, Sullivan Co, 14 Aug, EARLY; S of Flag Pond, UNICOI Co, 13 Aug, EARLY (both QW). *I. henrici*, Cedars of Lebanon St Pk, Wilson Co, 1 Apr 86 (DLE); Wolf River Trail, Shelby Co, 9 Apr; Hall Road nr Cordova, Shelby Co, 10 Apr (both MF).

MOTHS: *Econista dislocaria*, *Anacamptodes defectoria* (melanic), *Cleoria sublanaria*, *Lycia ypsilon*, *Hypagyrtis unipunctata*, *Nacophora quernaria*, *Eutrapela clemataria*, *Hydriomena pluvialis*, *Phyllodesma americana*, *Phoberia atomaris*, *Cissusa spadix* & *Zale lunifera*, all from Cedars of Lebanon St Pk, Wilson Co, 31 Mar 86, UV light (DLE). *Catocala innubens* & *C. innubens f. scintillans*, Shelby Forest nr Mississippi River, Shelby Co, 4 Aug, plus Dale Hollow Lake nr Salina, Clay Co, 23 Jul. *C. habilis* & *C. judith*, Dale Hollow Lake nr Salina, Clay Co, 23 Jul. *C. angusi*, Shelby Forest nr Mississippi River, Shelby Co, 4 Aug and Humphreys Co, 28 Jul. *C. angusi f. lucetta*, *C. obscura* & *C. residua*, Dale Hollow Lake nr Salina, Clay Co, 23 Jul. *C. sappho*, Shelby Forest nr Mississippi River, SHELBY Co, 4 Aug. *C. resecta* *luctuosa*, Shelby Forest nr Mississippi River, Shelby Co, 4 Aug. *C. resecta* & *C. dejecta*, Dale Hollow Lake nr Salina, Clay Co, 23 Jul. *C. vidua*, *C. lacrymosa*, *C. nebulosa* & *C. neogama*, Shelby Forest nr Mississippi River, Shelby Co, 4 Aug. *C. neogama*, Dale Hollow Lake nr Salina, Clay Co, 23 Jul. *C. cara carissima* & *C. amatrix f. selecta*, Shelby Forest nr Mississippi River, Shelby Co, 4 Aug. *C. amica*, Dale Hollow Lake nr Salina, Clay Co, 23 Jul. *C. atocala*, Shelby Forest nr Mississippi River, SHELBY Co, 4 Aug, STATE (all *Catocala* records MF). *Copevaleria grotei*, *Orthosia garmani*, *Achatia distincta*, *Peridroma saucia*, all from Cedars of Lebanon St Pk, Wilson Co, 31 Mar 86, UV light (DLE).

VIRGINIA. (no reports)

BERMUDA. (no reports)



ZONE 10 NORTHEAST: LABRADOR, NEWFOUNDLAND, MARITIMES, NEW ENGLAND, NEW YORK, PENNSYLVANIA, NEW JERSEY, MARYLAND, DELAWARE, DISTRICT of COLUMBIA. Coordinator: Dave Winter (DW). Contributors: John Albright (JA, via DFS & RES); William Andersen (WA, via RHS); Charles Bier (CB, via DFS); Dan Bogar (DB, via RHS); Richard Boscoe (RB); William Boscoe (WB); Nancy Braker (NB, via DFS); Brian Cassie (BC, for Mass. Butterfly Atlas Project, via DW); Lars Crabo (LC); W. Cromartie (WC, via DFS); John Fales (JF); Larry Gall (LG, via DFS); Robert Gardner (RG, via PK); John Glaser (JG); Robert Godefroi (RCG, via DFS); Paul Goldstein (PG, via TS); Steve Goldstein (SG); Ted Gordon (TG, via DFS); L. Paul Grey (LPG); William Grooms (WG, via PK); Louis Handfield (LH); Henry & George Hensel (H&GH); Fred Holland (FH, via PK); Jim Holmes (JH); Philip Kean (PK); Warren Kiel (WK, via JH); Ron Leuschner (RL); Mark Mello (MM); Gary Mitchell (GM); Mo Nielson (MN); Frank Rutkowski (FR); Calvin Schildknecht (CS); Dale Schweitzer (DFS, for The Nature Conservancy and the

Maine, RI, and PA Natural Heritage programs); David & Dana Shaw (D&DS); Tim Simmons (TS); Richard Smith (RHS); Ray Stanford (RES, clipped from Maine Sunday Telegram); Donald Strasburg (DWS); Richard Waldrep (RW, via PK); Tony Wilkinson (TW, via DFS); Ernest Williams (EW); Dan Zimmerman (DZ, via MM). Abbreviations: NWR = Nat'l Wildlife Reserve; S.F. = State Forest; Twp = township; vic = vicinity; WMA = Wildlife Management Area. County records have County name in Caps; (STATE) indicates state record. Range extension records in Caps.

MIGRATORY SPECIES: 1987 had the first heavy migration of *P. sennae eubule* since 1975. It was seen in Maryland as early as 8 July (JF) and 15 July (PK); extremely common from 8 Aug on; about 1/min flying along beach in Ocean City, Worcester Co. MD, 29-31 Aug (RHS). On 14 Sept, JF counted 1.9/min flying south; on 24 Sept some of the flight was northward; they continued numerous throughout November, and despite an 8" snowstorm on 12 Nov, 4 were seen and a fresh pair captured on 26 Nov (JF); it was common in S Prince George's Co, MD, 4 Sept-17 Nov (DWS). The species was observed in Massachusetts at Naushon Is., 24 Sept (BC); Chatham, Barnstable Co, 25 Sept (BC); 10 at Westport, 27 Sept (BC); West Tisbury, Dukes Co, 2 Oct (MM); 4 at S. Dartmouth, Bristol Co, 6 Oct (MM); Dedham, Norfolk Co, 7 Oct (DFS). *L. bachmanii*, Natick, MA, 28 June, and Sudbury 22 July, both Middlesex Co (BC); *E. claudia*, Hingham, MA, Plymouth Co, 15 June (BC), 6 at Easton, Bristol Co, 16 July (BC), 6-8 at N. Dartmouth, Bristol Co, 24, 27 July, and 3-6 on 22 Sept (MM). *V. cardui* was again rarely recorded in the northeast. The earliest *D. plexippus* noted by JF in Maryland was 18 May, with a fresh-looking specimen 31 May; numbers were sparse throughout the summer; the only significant migration was noted 23 September in the Chesapeake Bay area, then only mediocre flights into the first week in October, and a few singles to 7 November. Migration was extremely weak in September in eastern MA (SG, LW), and in Gettysburg, PA (CS).

LABRADOR. MOTHS: *Drepana arcuata*, 6 July; *Aspilates conspersarius*, 6 July; *Caripeta divisata*, 6 July; *Platarctia parthenos*, arctic form, Blanc Hablon, 3 July; *Polia rogenhoferi*, 6 July; *Papestra biren*, 6 July; *Lasionycta* sp. nov., 6 July; *Anomogyna perquirita*, 6 July, all L'Anse au Loup except as noted (LPG).

NEW BRUNSWICK. BUTTERFLIES: *H. comma* sp. Victoria Co, 5 Aug, oviposited readily on unidentified grasses; eggs hatched a few weeks later and larvae were refrigerated several weeks, then reared through on unidentified bunch grass; "apparently some populations of this species diapause as eggs, others as newly-hatched larvae" (RB). *E. laeta*, Edmundston, 21-29 May, captive oviposition on yellow birch and hazelnut; two thriving larvae on yellow birch cannibalized each other; one on hazelnut is overwintering as pupa (H&GH).

MOTHS: *Carsia sororata thaxteri* and *Holomelina lamae*, crowberry bog vic of Inkerman, 10 July; *Syngrapha surena*, St.-Basile, 8 Aug; *Nycteola frigidana*, Edmundston, 31 Aug; *Spartiniphaga panatela*, St.-Basile, 14 June; *Brachionycha borealis*, St.-Basile, 11 Apr; *Oncocnemis piffardi*, Edmundston, 13 Sept; *Stretchia plusiaeformis*, St.-Basile, 15 Apr (all H&GH).

NEW HAMPSHIRE. BUTTERFLIES: *P. napi* observed ovipositing on *Cardamine pennsylvanica*, northern Coos Co, 27 May (RB); *G. lygdamus couperi* (STATE), Whitefield, Coos Co, 26 May 1986 (WK); *P. faunus*, captive oviposition on *Betula lenta* and *Salix*, *P. gracilis* on *Ribes glandulosum*, and *P. progne* on *Ribes hirtellum*, northern Coos Co, 27-31 May, & all reared through (RB); 5 *Polytonia* larvae found 5 June on *Ribes triete* produced 2 adult *faunus* and 3 *progne* (RB). *A. milberti*, nectaring in large numbers on alpine goldenrod in a saddle between peaks on Mt Clay, Coos Co, 6 Aug (JH).

MOTHS: *Syngrapha epigea*, Jefferson, Coos Co, 9 Aug (JH).

MAINE. BUTTERFLIES: *M. hesseli* (STATE), Saco, YORK Co, late May (JA).

MOTHS: *Lycia rachelae*, Fryeburg pine barrens, Cumberland Co, 10 Apr (JA); *Syngrapha microgamma*, Wilson's Mills, Oxford Co, early, 30 May (LC); *Xylena thoracica* and *Lithophane thaxteri*, Fryeburg barrens, 10 April (JA).

MASSACHUSETTS. BUTTERFLIES: *H. sassacus* observed ovipositing on *Agrostis* sp., Medford, Middlesex Co, June (RCG); *P. viator*, NORTH, at Medford, 5 and 11 Aug (DFS, RCG); *B. philenor*, Fairhaven, Bristol Co, mid June (DZ) & Marshfield, Plymouth Co, 12 July (BC), Medfield, Norfolk Co, 27 July (BC), plus Great Barrington, Berkshire Co, 7 Aug (BC); *M. hesseli*, Walpole, Norfolk Co, 30 May, plus Douglas, Worcester Co, 6 June, and Carver, Plymouth Co, 5 June (all BC); *P. m-album*, N. Dartmouth, Bristol Co, 21 May (MM), and Sheffield, Berkshire Co, 7 Aug (BC); *E. phaeton*, 200-300 adults in 2-acre tract, ovipositing (and going through entire life cycle) on *Plantago lanceolata*, N. Dartmouth, 25 June (MM); *A. milberti*, Acton, Middlesex Co, 18 June (BC); A ♂ *B. arthemis astyanax* observed attempting to mate with an unreceptive ♀ *B. arthemis* on a small branch 40 cm off the ground, N. Andover, Essex Co, 28 June (SG); *E. anthedon*, N. Dartmouth, 27 July (MM), and 2 relatively fresh, 23 Sept, Wilmington, Middlesex Co, indicating a second brood (SG); *C. inornata*, Bourne, Barnstable Co, 7 June (MM), & the island of Martha's Vineyard (4 mi from the mainland), DUKES Co, Aug (PG, TS).

MOTHS: *Metarranthia pilosaria*, 12 June, and *Epirrita autumnata*, 9 Nov, S. Dartmouth, Bristol Co (MM); *E. imperialis*, 3 sites on Martha's Vineyard, Dukes Co, 15-31 July (PG, TS); *D. inscripta*, West Tisbury, Dukes Co, 21 May (PG, TS); *Darapsa versicolor*, S. Dartmouth, 20 July (MM); *A. cingulatus*, Lynn, Essex Co, 27 Sept (GM); *Cyenia inopinatus*, Edgartown, Dukes Co, 31 May (PG, TS); *Renia nemoralis*, Myles Standish S.F., Plymouth Co, 7 Aug (DFS); *Anomis erosa*, S. Dartmouth, 22 Sept (MM); *Catocala epione*, 8 Aug, and *C. flebilis*, 29 Sept, West Tisbury (PG, TS); *C. vidua*, common at Medford, Middlesex Co, 6-30 Aug (DFS); *C. cerogama*, West Tisbury, 26 July and *C. herodias gerhardi*, Martha's Vineyard, 28-29 July (PG, TS); *Catocala* believed to be *alabamiae* (det. E. Quinter), Myles Standish S.F., 26 July, 1970 (MN); *Argyrogramma basigera*, S. Dartmouth, 6 July (MM); *Spartiniphaga inops*, 5 taken in stand of *Spartina pectinata*, Horseneck Beach, Bristol Co, 10-11 Sept (MM); *Chytonix sensilis*, at bait, Medford, 6 Aug, and at light, Myles Standish S.F., 7 Aug (DFS); *Metaxaglaea violacea*, S. Dartmouth, 9-18 Nov (MM); *Chaetoglaea cerata*, Oak Bluffs, Dukes Co, 18 Oct (PG, TS), and Great Blue Hill, Norfolk Co, 20 Oct (DFS); *Abagrotis crumbi benjamani*, S. Dartmouth, 10 Sept (MM); *Orthosia garmani*, Westport, BRISTOL Co, 9 Apr 1986, and S. Dartmouth, 16 Apr 1986 (MM).

CONNECTICUT. MOTHS: *L. baileyi*, West Rock, New Haven Co, 23 Mar (LC).

RHODE ISLAND: BUTTERFLIES: *C. inornata*, Middletown, Newport Co, 31 May (MM).

MOTHS: *Metarranthia pilosaria* and *Clostera strigosa*, 21 June; *Zale submediana*, 20 April; *Catocala meskei*, Block Island, 11 Aug; *Acrionicta grisea* and *A. lanceolaria*, 28 May; *Oligia bridghami*, 23 July; *Agrotis stigmata*, 28 May, all Coventry, Kent Co, except as noted (all NB).

NEW YORK. BUTTERFLIES: *T. lineola*, *P. verna*, *P. glaucus*, all 18 July, vic Utica, Oneida (EW); *P. troilus*, Barre, Orleans Co, 21 July, and Bennington Twp, Wyoming Co, 14 Aug (D&DS); *A. virginianensis*, Pomfret Twp, Chataqua Co, 19 Apr (D&DS); *S. acadica* Barre Twp, no date (D&DS); *S. atlantis*, Nunda Twp, Livingston Co, 23 July (D&DS); *P. interrogatoris*, Lockport, Niagara Co, 27 May, & Barry Twp, 8 July (both D&DS), and vic Utica, 18 July (EW).

PENNSYLVANIA. BUTTERFLIES: *E. clarus* was taken at BLB, 7 Sept and *E. ruricola metacomet* at incandescent light in

Willow Grove, Montgomery Co (WB); B. philenor larvae sufficiently numerous to defoliate cultivated pipevines; P. cresphontes ova on garden rue (Rutaceae) reared to pupae; and from the sublime to the ridiculous, a C. ladon was observed perching on a blacksnake! D. plexippus larvae were not found until early Aug, but they used A. syriaca, incarnata, and tuberosa (the latter 4 species all in Gettysburg, Adams Co, CS).

MOTHS: Properigea ? apicalis (STATE), on 2 shale barrens 28 May, 1986 & 1987 and in a limestone glade near Alexandria, 17 Aug, all Huntington Co (CB); Hydraecia stramentosa, at the Alexandria glade, 17 Aug (CB); Apharetra purpurea, barrens, CARBON Co, 1 July, bog, TIOGA Co, 11 July, and barrens, CUMBERLAND Co, 30 July (all TW); Euxoa fumalis, and Loxagrotis grotei (STATE), at the Alexandria glade, 17 Aug (CB); C. angulifera, 24 June, A. vittata, late, 14 Oct, C. residua, 24 Aug, and C. amatrix, 28 July, all in urban Willow Grove, Montgomery Co (WB).

NEW JERSEY. BUTTERFLIES: H. attalus slossonae, Shamong Twp, Burlington Co, 4 July (DFS). B. philenor ♀ killed by cat in Jersey City, Hudson Co, 5 July (FR).

MOTHS: (all DFS) Metarranthia ? lateritiaria (not sp. in Forbes), at bait near Atsion, Burlington Co, in pitch pine lowland, 3 July; Catocala gracilis, larvae on Leucothoe racemosa (NEW FOODPLANT), Bass River S.F., Burlington Co, near Pomona, Atlantic Co, and at Lakehurst, Ocean Co, late May; C. coccinata, ovipositing on Quercus falcata, Cumberland Co, 30 June; C. pretiosa larvae were found on Aronia arbutifolia (16); Amelanchier canadensis (3), and Malus angustifolia (2), 18-28 May, with adults, mostly worn, at bait 2-7 July; species found at 12 sites from S Burlington Co, S through Atlantic, Gloucester, Cumberland, and Cape May Cos; searches at 9 sites in Ocean Co and central Burlington Co were all negative; preferred habitat is dense mature river swamps (Status Survey for USF&WS by DFS, LG, WC, et al.); C. grynea, 10-15 1st to 6th instar larvae all on 21 May on Malus angustifolia, Atlantic Co; C. praeclara, more than 18 2nd to 6th instar larvae on Aronia arbutifolia in Burlington, Gloucester, and Cape May Cos, and on A. melanocarpa, Cape May Co, 18-28 May; Agrotis buchholzi on east pine plains, Burlington Co, 29 May.

MARYLAND. BUTTERFLIES: L. accius, Green Ridge S.F., ALLEGANY Co, 30 Aug (WG); H. sassacus and A. hianna, both Whiteford, HARBOR Co, 6 June (RHS); B. philenor, Potomac S.F., GARRETT Co, 6 June, plus Salem, DORCHESTER Co, 15 Sept (PK); P. polyxenes, vic Blackwater NWR, many larvae on water-hemlock, 15 & 27 Sept, reared, some to adults, some to over-wintering pupae (RG & PK); P. protodice, McKee WMA, Montgomery Co, EARLY, 29 March (apparently overwintered, despite three severe winter storms, WG); E. nicippe, Savage R. S.F., Garrett Co, 6 June (early 2 consecutive years, ? resident, PK); A. halesus, New Bridge, Dorchester Co, LATE, on 20 Oct (WG & PK); C. cecrops, Calvert Co, very numerous, 6 May and 15 July-7 Nov (JF); P. m-album, Green Ridge S.F., Garrett Co, unusual abundance 23 Apr-10 May (RG, WC, PK); L. bachmanii, Calvert Co, LATE, on 26 Nov (JF); C. harrisii, new colony in Potomac S.F., Garrett Co, 6 June (PK, RW); D. plexippus, Talbot Co, found captured by a wheelbug, Arilus cristatus, 24 Sept (JF).

MOTHS: Lipocosma septa, 17 July, Epipages huronialis, common, 26 Sept, Palpita aenescentalis and Dioryctria disclusa, 17 July, and Thysanopyga intractata, 26 Sept, all St. Michaels, Talbot Co (RL); Pero zallisaria, Assateague Is., Worcester Co, and Petrophora subaequaria, Cranesville Swamp, Garrett Co, 24 July (JG); Nepytia canosaria, 17 July; Eupithecia slossonata, 26 Sept, St. Michaels (RL); A. cingulata, Kingsville, Baltimore Co, 3 Oct (FH); M. jasminearum, Big Pool, WASHINGTON Co, 14 June (PK) and Parkton, BALTIMORE Co, 11 & 18 July (FH); P. modesta, Green Ridge S.F., ALLEGANY Co, 31 May (RG) and 18 July (PK), and Parkton, BALTIMORE Co, 24 July (FH); Xylophanes tersa, Assateague Is., 5 fresh specimens, presumably locally grown, 24 July (JG), and also Parkton, 24 July (FH); Pagara simplex, Hurlock, Dorchester Co, 20 July (RG); Zale submediana and Catocala andromedae, St. Michaels, 17 July (RL); Diachrysia aeroides, Cunningham Swamp, 20 July and D. balluca, New Germany S.P., 27 July, both Garrett Co; Harrisimemna trisignata, Hurlock, 30 May; Meropoleon diversicolor, Cunningham Swamp, 24 Aug-10 Sept; Elaphria georgei, Hurlock, 14 May; Lithophane baileyi, New Germany S.P., 20 Apr; Epiglaea apiata, Cherry Creek Glades, Garrett Co, 14 Sept; Feralia jocosu and Metalepsis salicorum, New Germany S.P., 20 Apr (all JG).

DELAWARE. BUTTERFLIES (including old records of F. Morton Jones in the U. of Delaware collection, fides D. Wright, to flesh out the meager state data): E. baptisiae (STATE), Stanton, New Castle Co, 8 Aug, 1928; W. otho (STATE), Ellendale, Sussex Co, 31 July, ?? year; E. conspicua, New Castle Co, 11 July, 1919; P. ocola (STATE), Townsend, New Castle Co, 27 Sept, ?? year; P. protodice, New Castle Co, 27 Sept, 1930; F. tarquinius, Wilmington, New Castle Co, 28 April, 1906 (all FMJ). M. hesseli, 7 May (first STATE capture, but see record of photo in 1986 summary, RS), and second brood, 22 July (DB), both at Bethel, Sussex Co; I. irus, Rehoboth, Sussex Co, 1 June 1920; L. bachmanii (STATE), Rehoboth, 16 July, 1896; C. selene myrina, Wilmington, 7 July 1904; P. progne (STATE), Wilmington, 27 May, 1942 (all FMJ).



ZONE 11 HAWAII/PACIFIC ISLANDS: Coordinator: J. C. E. Riette [R]. Contributors: Robert L. Langston [L], Kensington, CA, U.S.A. John T. McBurney [M], Anaheim, CA, U.S.A. There were no reports from the Pacific Islands. The weather in 1987 changed from an unusually severe dry condition to a more normal one in late fall. Periods of intermittent heavy showers were again being experienced. This situation also continues into 1988 but it is still too early to say if this will markedly influence the lepidopterous populations. At the end of 1987 most of the species were not very numerous, exceptions being only Danaus plexippus and Agraulis vanillae.

OAHU. The above holds true especially for this island where both species are thriving. The 2 albino forms seem to be somewhat more numerous than before and in more than only a few colonies of the species. Follow up work is planned. [L] found the endemic lycaenid, Udara blackburni, doing well on Mt. Tantalus (Honolulu) in association with Acacia koa. He even found the species doing better than in 1978 and 1985. His observations are from December '87/January '88. Papilio xuthus, Pieris rapae and the introduced Lycaenidae were all only seen sporadically [R].

KAUAI. [L] found the colony of Brephidium exilis at Salt Pond Beach, SW of Hanapepe still going strong. He tried to locate other colonies of the species on Kauai but found none. He also reports Udara blackburni at 4 localities in good numbers. Danaus plexippus was common and he observed one fresh Vanessa tameamea on Kumu Wela Road (East of the Kokee Museum). Otherwise he found the same conditions as we here on Oahu. Among the observed moths, it should be noted that Hypena lacertalis, introduced for biological control of Lantana, is doing well at 1200 m above sea level. [R] reports that the endemic sphingids and geometrids in the higher elevations of Kokee State Park, where the dry weather was not of too much influence, were as numerous as ever. Only Tinostoma has not been seen for several years now.

HAWAII. [M] reports from the "Big Island" the same picture as above. Interesting is that he found Pieris rapae and one of the lycaenids (Lampides boeticus) "fairly common". He also mentions the skipper Hylephila phyleus as "fairly common", however Agraulis vanillae was rare. This interestingly shows how, with otherwise very similar conditions,

different developments can occur. The Bishop Museum (Entomology) made a fact finding trip to the "Big Island" in February 1987, and observed Vanessa tameamea in numbers at Pu'u Maka'ala (Nature Area Reserve) at 1200 m above sea level (D.J. Preston rep.).

MAUI. For the moth populations, [R] reports that the endemic sphingid Manduca blackburni was again observed in the larval stage on the endemic shrub Nothocestrum.

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ZONE 12 THE NORTHERN NEOTROPICS: MEXICO, CENTRAL AMERICA, THE ANTILLES. Coordinator: Eduardo C. Welling M. Contributors: James P. Brock, Ralph E. Wells. Only the two reports this year. Whether others were sent and did not arrive here has yet to be seen, as the postal system becomes more deficient. Weather notes for 1987: The tendency was for localized to semi-widespread drought. Reports were heard about drought in the northern part of Mexico, yet at other times there was sufficient rainfall. In Belize rainfall was very scarce, especially in the northern part of the country; many wells and some inland lagoons having dried up by December. In Guatemala, Welling observed a paucity of rain from late June through early August. In the northern Yucatan peninsula it was normally dry up to the end of May, rains beginning on time, but then becoming torrential and excessive from June through late July. From then on the rain was either nil or exceedingly sparse. August and September in and around Merida without refreshing afternoon rain might be a better persuading agent to sinners than a good preacher's sermon, and it was pure purgatory!! No conclusions can be drawn yet on the effect of these erratic weather patterns on the insect populations.

MEXICO. BAJA CALIFORNIA NORTE. Wells collected 70 km (42 mi) N of Guerrero Negro, finding 1 female Hyalophora euryalus and 55 km (33 mi) N of the same locality, finding several old cocoons of the same species. The latter locality is probably the furthest record S on peninsular Baja California. No date given for these. Thirteen km (8 mi) S of Punta Prieta, he found 50 larvae of Hemileuca electra on Eriogonum fasciculatum, these representing the furthest southerly record for electra. Ninety-five km (57 mi) S of Santa Ynez, on Feb 2, he collected Pieris protodice from a population with interesting yemon-yellow basal blotches, and Anthocaris cethura, this latter species being commoner 75 km (45 mi) S of the same town.

BAJA CALIFORNIA SUR. Wells blacklighted at Gran Canon on Cedros Island, Jan 3-9, finding 2 males and 2 females of H. euryalis cedrosensis. He also found a 4th instar larva on Pachycormus, a new foodplant record. These reconfirm the presence of the subspecies on Cedros Island and also are the furthest southerly record. At the same locality and at Canada de Ondas (spelling?) were found ten 2nd and 4th instar larvae of H. electra on E. fasciculatum. These are the furthest southerly record on insular Baja California Sur and the first record for the state. Wells also collected in the Sierra de Las Lagunas in Sept. Near Ramal de Naranjas he took Xylophanes falco on Sept 1. At El Ajuate, Papilio astyalus was common on Sept 4. At Canon de Santo Tomas, he found Phoebis philea and Papilio polyxenes on Sept 2. Also, further south, in the cape area from 20 km (12 mi) N of La Paz to San Lucas, Amblyscirtes tolteca was all over the place.

QUINTANA ROO. Welling blacklighted May 30 to June 1 in the northern part of the state near Nuevo X-can and found Sphingidae scarce, Eacles imperialis quintanensis with its interesting color forms, E. ormondei and a few other things. Smaller moths were almost nil at that time. Further collecting later on produced series of interesting moths in other families.

GUATEMALA. Welling managed to get to Guatemala, finding some interesting coleoptera collecting at Puente Ixquizal. Mpio San Sebastian Huehuetenango, Huehue, above 1700 m elevation, in late June, along with assorted moths. Cantel, in Quetzaltenango department at 2200 m elev produced Rothschildia orizaba, Copaxa lavendera and Eupackardia calleta, plus Arctiidae, Noctuidae, etc. A surprise was waiting at Quisache, Mpio Acateango, Chimaltenango at 1650 m and above on the sides of the Volcan de Fuego, where former blacklighting in July produced nothing, but this year produced hoards of moths. In contrast, at Tecpan Guatemala, Chimaltenango, above 2150 m elev, and at Chimaltenango, Chimaltenango, above 1800 m, moths were very scarce. Few things were out at Puerto Barrios, Izabal since the east coast area was recovering from a very severe drought. Butterflies were scarce at Baleu, Mpio San Cristobal Verapaz, Alto Verapaz, above 1200 m, where only some common Ithomiidae and a few Heliconius charitonius and ismenius were taken due to drought conditions. A few Papilio ornythion and thoas were taken at Tulumaje, El Progreso, above 300 m, about late July. Blacklighting at Los Encuentros and Xajaxac (above 2,500 m and at 2,375 m, respectively), Mpio Solola, Solola, produced good results, including E. calleta. In El Peten, forest fires ravaged parts of the central portion of the department, including areas within the National Park at Tikal, due to excessively dry conditions.

WEST INDIES. BEQUIA, ST. VINCENT, in the Southern Carribean. Brock spent 24 and 25 May at Port Elizabeth, collecting sixteen species of butterflies. Accordingly, only one species had been recorded from there by James Scott in "Papilio, #3", 1986. Recorded now are Pyrgus oileus, Chiomara asychis, Urbanus proteus, U. dorantes, Chioidea catillus vintra, Panoquina panoquinoides, Polites vibex dictynna, Hemiargus hanna, Electrostrymon angerona, Strymon bubastus, Dryas iulia, Agraulis vanillae, Anartia jatrophae, Mestra cana, Phoebis sennae and Eurema venusta.

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ZONE 13 SOUTH AMERICA. Coordinator: Boyce A. Drummond. Contributors: Keith S. Brown, Jr. (KS), John T. McBurney (JM), E. Schmidt-Mumm via KB (ES), David P. Shaw and Dana E. Shaw (D/DS). KB's annual contribution is again extensive (5 countries, many localities) and ecologically informative, especially for Ithomiinae, Heliconiini, and Papilionidae, the latter including updates on studies previously reported in the 1984, 1985, and 1986 ESS's. Tinalandia resort in western Ecuador continues to be a productive locality: compare D/DS's 140 species of butterflies in 2-1/2 days in June 1987 with Tom Emmel's group of 28 collectors recording over 250 species in 8 days in May (1986 ESS). JM's report noted that many of his butterflies and moths from several localities in Peru remain unidentified, a comment heard from many collectors after visiting the tropics. KB reported a very dry spring with unpredictable weather patterns in SE Brazil; no other weather reports were received.

PANAMA. DARIEN. In February, KB collected along a transect running roughly from Yavisa to near Santa Fé. In primary forest, 6 km NW of Yavisa, he collected Mechanitis menapis dariensis, M. polymnia veritabilis, Callithomia beronilla, strongly hybridized Heliconius erato (hydra x venus x petiverana) with pure H. melpomene vulcanus, H. ismenius bouletti, and H. s. sapho, Eumaeus nr minyas, and pure Anartia amathea on oxbow lake margins. Only 30 km farther NW (W of Meteti, in more open country), with the same Heliconius spp and Thyridia psidii aedeasia, was found a completely hybridized Anartia population (amathea x fatima) with near equilibrium ratios of F1, F2, and backcross phenotypes (N = 55). A further 25 km NW (7 km SW of Santa Fé) gave nearly pure fatima (only 1 F1) along a river course through very

scrubby vegetation on sandy soils, which continue NW to near Bayano. These data suggest conspecificity of fatima and amathea, disassociation by habitat, and little relationship between the hybridization and recent (anthropic) vegetation changes.

CHIRIQUI GRANDE. KB found this area to be rich in Ithomiinae (20 species recorded), with Tithorea tarricina pinthias and 6 species of Greta at a 900 m site, and, at sea level, Melinaea lilis parallelis, Thyridia psidii melanotus, Scada zibia xanthina, Mechanitis polymnia isthmia, M. menapis doryssus, 4 spp of Ithomia (leila, bolivari, diasia, heraldica), Oleria paula, O. rubescens, Callithomia hezia, Godyris sosunga caesiopicta, and Hypoleria cassotis. Also taken at sea level were 3 Eueides (lybia olympia, lineata, vibilia vialis), 4 Heliconius (hecalesia formosus, ismenius telchinia, hecale zuleika, and cydno chioneus), 4 Morpho (amathonte, cypris, theseus, peleides) and Panacea procilla, Arcas imperialis, and many interesting Riordininae. Samples of Philaethria dido taken in the extreme SE (Meteti, Darien), extreme NW (Chiriqui Grande), and the center of the country all showed a chromosome number of 88.

COLOMBIA. ANTIOQUIA. KB rediscovered Eueides emsleyi in August at two sites: 5 km S of Puerto Valdivia (400-800 m) and at km 104 of Autopista Medellin-Doradal on a 1200-m ridge N of Quebrada Vallesol, where a male was seen inspecting the foodplant, Passiflora (Tryphostemma) gracillima, and a 3rd instar larva was collected and reared to a male adult; adult behavior, larva, and pupa are identical to those of E. lineata, supporting conspecificity. Puerto Valdivia also gave Melinaea idae, Mechanitis macrinus, Philaethria dido, Eueides tales xenophanes, Heliconius cydno chioneus exclusively; Vallesol had almost only H. c. cydno, and also Temenis pulchra, Evenus sp. and many Riordininae on the ridge.

VALLE DEL CAUCA. (All records by KB) Localities near Cali: San Antonio (between km 14 and Buenaventura), 1800-2200 m, gave Podotricha euechroia, Hypanartia dione chasing off swallows (1), Catasticta strigosa actinotis, many unusual Theclinae, Corades sp. laying eggs on a scraggly bamboo, Hyalenna perasippe ovipositing on a Solanum (Anthoresia) with a pupa found on this plant, Velamysta phengites, Anaea nesea, Alera vulpina; Peñas Blancas, 1900-2200 m on E slopes of Farallones, gave an unusual Caligo, Patricia decyllidas, Eueides procula edias laying eggs on a large tree (Turneraceae) and also a larva found on Passiflora oerstedii, Papilio cacicus and Prepona praeneste have been seen ovipositing here on still unidentified food plants; a small woods 5 km E of Darien, 1450 m, gave very abundant Tithorea tarricina, few Elzunia humboldti regalis, common Heliconius cydno cydnides and Laparus doris, including specimens with black FW, plus 3 spp of Euesis; the middle Rio Calima on the Pacific slope gave Valle de Cauca fauna mostly down to 700 m (at junction with Rio Bravo), including Olyras crathis, Melinaea lilis dodona, Hyposcada virginiana consobrina, Hypothyris lycaste limosa and H. euclea with very different larvae both feeding on a Solanum (Brevantherum), Godyris sosunga petersi, Altinote alcione cyanea (rare) and the very similar A. neleus (abundant) along with A. ozomene, Napeogenes cranto ssp., Heliconius cydno (cydnides x zeline), H. erato chestertonii, H. melpomene vulcanus, Laparus doris with black FW, H. clysonymus (clysonymus x hygiana), many Nymphalinae including Pycina samba, Consul panariste and Anaea nessus (both common), normal Eurytides euryleon (no white pleiades) and E. columbus (no orabilis), and large numbers of unusual Hesperidae. East of Buenaventura, the areas of Quebrada Bendiciones and Quebrada La Sierpa gave few butterflies, but those of interest included a strange dark ssp of Callithomia hezia, Philaethria dido (chromosome # = 88), many very unusual Riordininae, including Mesenopsis bryaxis and a new Napaea, Papilio birchalli (new SW range extension), Heliconius hecalesia ernestus. Farther SW at Rio Tatabro appeared the unusual large new species of Philaethria (chromosome # = 64) reported in last year's FSS, Neruda godmani (common), a Morpho theseus on a moth sheet at 3 AM (1), very rich Nymphalinae, Theclinae (including Eumaeus gigantea), and especially Riordininae, such as Euselasia rhodogine, Pheles heliconides, Methonella sp., Uraneis zamuro, Anteros carausus, 2 spp of Chimastrum, Mesenopsis bryaxis, 5 spp of Symphachia, and many fine skippers; a pair of "Thecla" orcydia taken in copula showed the female plain below like a large Calystryma, very different from the male. Still farther south, ES found very unusual new subspecies of Heliconius cydno and Parides erithalion on Isla Gorgona (NW of Guapí in the Pacific) in June and excellent Heliconiini and Ithomiinae along the Monopamba-Orite pipeline on the mainland in October. KB visited the Reserva Natural La Planada, Narino, 1800 m, in August and encountered very rich Pronophilini, Parataygetis lineata, abundant Heliconius hygiana, many Dismorphia, Actinote alcione ssp., many Adelpha, Caligo oberthueri, Antirrhoea geryon and many Nymphalinae. Nearer the coast but still behind the front range, on the trail from Pilpas to Vegas (1000 m) was a very rich fauna including Antirrhoea miltiades, Napeogenes cranto ssp., Heliconius cydno zeline (pure), H. melpomene and H. erato (both hybridized with W Ecuador races), H. atthis common, Callicore deniva ssp. and Eurytides columbus.

MIGRATORY SPECIES: KB saw many Urania leilus fulgens migrating in August, SE in Antioquia (250-2500 m), S in Cauca Valley near Cali (where they are very rarely seen), and NE on the Pacific Slope; ES reported this species on Isla Gorgona far from the coast in June.

VENEZUELA. BARINAS. Above Barinitas, in the Mérida Andes, KB found Altinote stratonice larvae on an abundant roadside composite, possibly in the tribe Mutiseae, A. callianira and A. hylonome, a Pagyris ulla female (full of small eggs, obviously laid in large rafts), many Perisama, and Consul panariste.

ZULIA. Along the Rio de Oro, Sierra de Perija foothills in SW Zulia, though very dry in February, KB found Tithorea tarricina franciscoi, Heliconius cydno (cordula x cydnides), H. erato hydra and H. melpomene with heterozygous HW yellow bars, and H. hecale annetta. In the foothills farther north (Machiques to El Tucuco) in late June, KB found all three species of Danaus in abundance, Doxocopa laure and pavon, a mixture of Parides anchises and iphidamas forms, Eurytides telesilaus, and Mysoria barcastus and many other skippers.

TACHIRA. Several localities were visited by KB. Quebrada La Chacona just N of San Juan de Colón was very rich in both February and June, providing Caligo atreus, Pierella luna, Tithorea tarricina franciscoi, Philaethria diatonica (chromosome # = 72, other numbers possibly present), Eueides tales franciscus, Heliconius cydno gadouae and a hybrid backcross with H. melpomene, H. antiochus, Parides lycimenes ssp., Eurytides protesilaus female, "Thecla" gibberosa and several unusual Riordininae. Localities near San Cristobal (La Parada, La Bermeja, Chorro del Indio) gave excellent Ithomiinae in July on Adenostemma flowers, including Eutresis hyperia, Ithomia terra, Hypomenitis decretis; also Philaethria spp., Heliconius cydno cordula, Evenus coronata, many Dismorphia, and Eurytides columbus and phaon. West of San Cristobal on the road to Delicias were seen 4 Altinote [stratonice, nauta, callianthe, and hylonome (eggs and larvae of the latter on Verbesina, Asteraceae)], many Perisama species and other high-elevation Nymphalinae, Papilio cacicus, and good Satyrinae and Catasticta (3 species). The Rio Frio area S of San Cristobal was rainy and gave few good species: Eueides tales pseudaneas, 3 Heliconius (hecale rosalesi, antiochus aranea, and cydno cordula). Most time was spent in the region N of Los Naranjos on the Pregonero road, including ridges and hilltops 9-11 km N and a low pass 5 km N of La Fundación. At least 3 types of Philaethria (chromosome numbers = 21, 52, and 72), barely distinguishable externally, fly together here and were most common in late December. Many other good species were present, including Morpho menelaus, Pierella chalybaea, Taygetis near echo, Euptychoides saturnus, Pharneuptychia phares, Euptychia jesia and rufocincta, Chloereuptychia arnaea, 3 Eueides (lybia morita, tales pseudaneas, vibilia mereau), at least 8 spp of Adelpha with four having extensive orange on the hindwing, 5 Heliconius (numata peeblesi, hecale rosalesi, cydno cordula, and very blue erato and melpomene), several species of Prepona, Agrias claudina (also found with A. amydon near

San Cristobal). Sea sophronia, Arcas imperialis, Anaea laura spp., 4 Symmachia (tricolor, menetes, accusatrix, probetor), Orinba gelasine, 3 Parides (lycimenes, erithalion, and iphidamas, all new subspecies), and many good skippers, including a dark Pyrrhopyge resting gregariously under high leaves at 5 PM.

EQUADOR. **PICHINCHA.** Beginning June 17, D/DS collected for 2-1/2 days at the Tinalandia Resort, 17 kms east of Santo Domingo de los Colorados (670 m elevation) and took a total of 140 species of butterflies. Taxonomic totals and selected species include: Pieridae (15 spp), Papilionidae (only Parides erlases), Morphinae (1 sp), Acraeinae (2 spp), Danaeinae (2 spp), Brassolinae (4 spp, including 2 Caligo and 1 Eryphanis), Heliconiini (13 spp, including H. atthis, H. ismenius metaphorus, H. eleuchia primularis; H. erato cyrbia and H. melpomene cythera were common), Satyridae (12 spp, including Cithaerias menander and an Oxeochistus sp), Ithomiinae (24 spp, including Melinaea ludovica vespertina, Callithomia hydra, Hypothyris lycaste antonia, Oleria zelica; Mechanitis polymnia chimborazona and M. menapis mantineus, Scada zemira, and several Ithomia spp were common), other Nymphalidae (29 spp, including Hamadryas laodamia), Lycaeninae (2 spp: Zizula cyna and Thecla near meton), Riodininae (10 spp), Hesperidae (25 spp).

NAPO. KB collected on forested slopes north of the Misahualli area (300-600 m) on the upper Rio Napo in August and took many species, including Papilio torquatus, 3 Eurytides (serville, thyastes, agesilaus), and many Parides. Farther north, at the first major bridge on the new road being built from Jondachi to Coca, along a ridge, KB compiled an excellent species list, including Satyridae (Pseudohaetera hypaesia, Cithaerias esmeralda, Taygetis larua), Ithomiinae (Olyras crathis montagui, abundant Melinaea menophilus zaneka and M. maenius simulator with only one M. marsaeus mothone, Callithomia hezia phagesia, Dircenna varina, D. loreta, common, D. vandona, Napeogenes apulia sulphureophila, Ceratinia radiosa, Godryis duillia), and Heliconius (numata lenaeus, n. aristiona, telisiphe, and melpomene aglaope). The region N of Baeza, severely damaged by vulcanism and mudslides after a large earthquake, produced little of interest except for a single "Oleria" baizana (which actually belongs to a new genus being described for "Pteronymia" canilla) in the lowest reaches of the Cayambe-Coca park.

PERU. JM collected in several localities in eastern Peru: near Tambopata Nature Reserve on the Rios de la Torre and Tambopata, MADRE DE DIOS (TNP) (see NEWS No. 4, 1983, for a report on this locality); Explorama Inn, 15 km S of Iquitos, LORETO (EXI); Explorama Yanomono Lodge, Yanomono Channel, Rio Amazon, LORETO (EYL); Explornapo Camp #2, Rios Sucusari and Napo, LORETO (EC2). Although many specimens remain unidentified, the following is a summary by family of material determined to date.

BUTTERFLIES: June 20 & 28 at TNP: Nymphalidae (7 spp, including Morpho menelaus ssp and M. h. helenor), Satyridae (1 spp: Euptychia h. hesione), Pieridae (1 spp: Itabalia pisonis), and Riodininae (1 spp: Nymphidium platea). July 5-7 at EYL: Papilionidae (1 spp: Eurytides), Pieridae (4 spp: Eurema venusta and E. agave, Phoebis sennae and P. a. argante), Satyridae (2 spp: Euptychia hesione subobscura and Pierella astyoche), Nymphalidae (7 spp), Heliconiini (5 spp), Ithomiinae (3 spp), Danaeinae (1 spp: Danaus eresimus erginus), Riodininae (5 spp, including Stalactis euterpe latifasciata [common] and S. calliope), and Hesperidae (3 spp). July 9-12 at EC2: Papilionidae (7 spp, including 4 spp of Eurytides), Nymphalidae (15 spp, including Morpho achilles patroclus, 4 Marpesia, and 2 Eunica), Pieridae (2 spp: Hesperocharis nera aida, Pseudopieris nehemia aequatorialis), Riodininae (2 spp), and Satyridae (9 spp, including 4 Pierella, 2 Cithaerias, and Haetera piera).

MOTHS: All taken between July 6 and 13. Saturniidae: Camelia nr septentrionalis (EYL), Rothschildia aurota ssp (EXI); Sphingidae: Aleuron neglectum and Nyceryx coffeae (EYL), Aellopos ceculus and Xylophanes chiron nechus (EC2). A collection of moths taken at Machu-Picchu on July 3 remains unidentified.

BRAZIL. KB conducted an extensive biological study and mark-recapture program of swallowtails in SE Brazil: Espirito Santo (ES), Rio de Janeiro (RJ), and São Paulo (SP). A very dry spring with confusing weather much reduced and fragmented the early broods of Papilionidae and other species monitored. KB's 1987 studies, which continue those reported in previous FSS's, involved 46 populations of 22 species of swallowtails, including 3 on the IUCN list of endangered animals: [1] Papilio himeros: 18 marked (2 females) in last known colony, near Linhares, ES (LN) from Sept-Dec with only 1 recapture; population very fragile, probably peaking at near 20 adults only. [2] Eurytides lysithous harrisianus: 67 marked (24 females) in 2 generations in last large colony in Barra de São Hoão, RJ (BSJ), with only 2 recaptures; population healthy, peaking at well over 100 individuals, and colonizing new parts of the forest; many eggs and larvae found on both Annona sp and Rollinia laurifolia; proportions of forms were 75% platydesma, imitating Parides ascanius, 20% sebastianus, imitating P. zacyanthus and P. anchises nephalion, and 5% harrisianus, a recombinant. [3] Parides ascanius: 108 marked (37 females) in a large new colony in BSJ occupying a half hectare covered with Aristolochia macroura near the most strong part of the harrisianus colony; 52 recaptured on later days from 1-12 times, population peaking near 40 with ca. 25/week recruitment; many juveniles seen; removal of 16% of recruitment (3 males and 1 female) per week at peak of one generation seemed to have an appreciable effect on the next one. Other species studied, including in Campinas, SP (CP), Serra do Japi, SP (JP), Poco das Antas, RJ (PA), and Rio Dourado, RJ (RD), were [name (locality code) total number marked (number of females among these)/number recaptured on later days, comments]: Battus crassus (BSJ) 5, many larval groups on A. macroura; B. polystictus (JP) 7, puddling; B. polydamas (CP) 21(9)/1, (BSJ) 11(8), on A. macroura, (LN) 6(1)/1; Parides ascanius (PA) 3; P. zacyanthus (BSJ) 67(26)/3, (PA) 13(2)/1; P. anchises nephalion (BSJ) 44(17)/1, (PA) 17(2)/1; Eurytides protodamas (PA) 2, (JP) 9/2, (LN) 2, oviposited on Rollinia laurifolia; E. asiis (JP) 16, tree on which this species oviposited in 1968 in Santa Teresa, ES, was revisited and identified as Annona cacans; E. lysithous lysithous (JP) 16; E. 1. harrisianus (PA) 2, one of each major morph, confirmed but small population in the reserve; E. telesilaus (BSJ) 5, (LN) 2, actually quite common including many females in both places; E. bellerophon (JP) 3; E. nigricornis (JP) 15, (PA) 1, (LN) 3; E. dolicaon (JP) 30, (LN) 1; Papilio scamander (CP) 33(10)/8, (JP) 3; P. torquatus polybius (CP) 43(9)/4, (BSJ) 11, (LN) 7; P. hectorides (CP) 35(13)/9, (BSJ) 37(1), (JP) 18; P. anchisiades capys (CP) 31(6)/2, (BSJ) 36(13), (LN) 12(5); P. thoas brasiliensis (CP) 28(13)/8, (LN) 5, (PA) 3, (BSJ) 90(32)/10, population peaking around 110; P. androgeus (BSJ) 19; P. astyalus (BSJ) 1, (LN) 40(14)/1, (CP) 772(204)/178, population peaking near 300 (January). 550 (late March) and 150 (December, one month late due to dry spring). Species captured for such biological study and not marked, in addition to all of the above, included many females of white Eurytides (LN, BSJ, JP), G. glaucolus (RD), G. helios (JP), P. cleotas (JP), Parides agavus, bunichus, proneus and anchises nephalion (CP), and P. tros (RJ). Continual field survey of the following plants (localities) revealed eggs and larvae of the indicated species of Papilionidae: Aristolochia macroura and A. odora (BSJ), Battus crassus and polydamas, P. zacyanthus and P. a. nephalion; A. cymbifera (RD), Parides a. nephalion; Annona cacans (JP), E. protodamas, E. lysithous, last also in same locality on Rollinia sylvatica and R. emarginata, transferring well between these and the two plants in BSJ; Cryptocaria aschersoniana (JP), E. dolicaon, P. cleotas, E. nigricornis; Magnolia sp (CP), P. scamander; Citrus (CP), P. hectorides, (Foz de Iguaçu, Parana), P. anchisiades, (LN), P. androgeus and P. astyalus, (RD), P. androgeus; Piper various species (CP/JP), P. hectorides (BSJ), P. thoas; Esenbeckia leiocarpa (LN), P. astyalus; E. febrifuga and Galipia jasmiflora (CP), P. astyalus (all of these last plants Rutaceae). All recapture data supported rapid aging of adults with a 10-day average and 30-day

maximum lifespan for these swallowtails, even in virgin forest habitats, with the possible exception of the "sit-and-wait" *P. scamander* which may age only half as rapidly. Some individuals were recaptured over 5 km from marking site (once 2 km in less than an hour) while others were found day after day at the same spot. Male *P. scamander* territorial perches traded defenders (often back and forth) at 1 to 3 day intervals, with dramatic aerial battles at the switches. Further studies involved the nearly unknown and probably threatened *Perrhybris flava* in the area of Santa Leopoldina, ES (SL) (deciduous forest on steep rocky hills with rushing streams, 200-500 m, sympatric with *P. pamela* at 200 m in foothills), with 139 (4 females only) marked and 57 recaptured on later days; lifespan nearly a month, maximum over two months, population size quite constant near 100, individuals flew at least 5 km from marking site; foodplant a tree (*Capparis*), eggs and early larvae obtained on *C. brasiliensis*, also used by *Ascia buniæ* in BSJ where 48 were marked (2 recaptured) with the population surely over 2000. Male *P. flava* are very conspicuous as they fly together over the forest canopy in early AM. Also marked was the little-known *Hypoleria* (not *McClungia*) *fallens* in RD (4 of each sex; larva and pupa on a *Cestrum*) and PA (2 males), no recaptures, populations probably over 30 in both colonies. The second strong colony of *Heliconius nattereri* was discovered in a fantastic forest site 25 km W of the first (2 marked, 1 recaptured); in the main colony, the population hung near 50 in April. Additional interesting records in these sites, all covered intensively weekly or twice-weekly all year (CP) or from Sept-Dec, included: *Castnia* near *beskei* (CP), May, nectaring on *Eupatorium*; *C. schreibersi* (LN), Oct; *C. satrapes* new ssp (BSJ), Nov, together with 9 other *Castnia* (*cochrus*, *fonscolombei*, *acraeoides* nectaring on *Eupatorium*, *decussata*, *orestes*, *albosignata*, *pallasia*, *thais*, *marcel-serres*); *C. satrapes* (JP), Dec, oviposited on an epiphytic Commelinaceae(?); *Callicore selima sanguinea* (common in BSJ and PA), feeding on a *Serjania* vine; *Danaus eresimus plexaure* (BSJ, LN); *Zelotaea phasma* (LN); *Pteronymia hemixanthe* (SL), eggs and larvae on *Solanum laxiflorum*; *Napeogenes cyrianassa yanetta* (RD); *Leucochimona philemon matatha* (SL), oviposited on very small forest monocots in 2 families; *Pyrropyge* sp and *Elbella* sp (PA), commonly sleeping under leaves at 4 PM; *Cunizza hirlanda* females (LN); *Opoptera aorsa* and *Dasyophthalma creusa* (SL).

MIGRATORY SPECIES. KB observed migrations of *Historis acheronta*, *Marpesia chiron*, and a few *Urania leilus brasiliensis* in November in Linhares, ES.

From The Editor's Desk

June Preston



Although this is the longest Season Summary yet, it is shorter for much of the western portion of the U.S. than it has been for the past few years, possibly reflecting the fact that the season was quite early in many areas so that only the local collectors found the collecting satisfactory whereas the casual collectors, such as Mr. Preston and myself, found collecting unsatisfactory in general, having missed out by several weeks or more on the flight periods of the species we had gone after throughout the western states. One can only hope that collecting will be better in 1988. Again there were no reports from Vermont. We have no resident members in that state but surely there are good collecting areas still to be found there! There were also no reports this year from Kentucky, Virginia, Louisiana, Bermuda, Newfoundland, Nova Scotia or Prince Edward Island nor from much of Northern Mexico (perhaps due to the difficulties in obtaining collecting permits in Mexico at this point in time). But all in all there seems to be good coverage of the North American Hemisphere and, thanks to Keith Brown, a pretty wide range in the South American Hemisphere also. Our thanks to all of you who took the time at a very busy season to send in your contributions for the records, and my special thanks to all the Zone Coordinators for jobs well done.

The letters that cross my desk always provide interesting insights into the lives of the writers. Many of these letters, though quite personal, deserve to be shared with all our readers. As always, the letter printed here expresses solely the opinions of its author and does not in any way reflect any policies of the Lepidopterists' Society.

Dear June:

In the May/June 1987 issue, you published a book review of *Butterflies and Moths: A Companion to Your Field Guide* by Jo Brewer and Dave Winter, published by Prentiss Hall Press, A Division of Simon & Schuster, Inc, Gulf+Western Bldg., One Gulf+Western Plaza, New York, NY 10023 (you did not include the publisher's address), priced at \$14.95. After reading the book, here are some further comments to your review.

I have been collecting and observing butterflies and

moths for over 70 years. When I was 9 years old, my father showed me how the "worms" from the carrots in his garden turned into beautiful swallowtail butterflies. I have been fascinated ever since. The book is the most interesting and educational that I have ever read, and should be in every library and in the possession of every Lepidopterist, both amateur and professional. A very large percentage of the members of The Lepidopterists' Society are amateurs, just like me. Jo and Dave wrote this book for us, in layman's language which is a pleasure to read. Yet it tells everything anyone would want to know about butterflies and moths. There are descriptive pictures and drawings. It is a lifelong experience of collecting and observations of these two Lepidopterists put in words. Finally a book has been published that meets the needs of everyone, from grade school students to professionals. The Lepidopterists' Society should honor Jo and Dave for such a fine work.

Ray W. Bracher



THE PIPEVINE SWALLOWTAIL IN MASSACHUSETTS

I read with great interest John Bowe's notes in the Jan./Feb., 1988, issue of the NEWS on the recent population increase of *Battus philenor* in New Jersey. Growing up in New England during the '50's and '60's, I found it to be absent from my region, except for a single specimen captured by my cousin at a flower garden in Branford, Connecticut (1962).

Last summer, I was very surprised when my friend Gray Parrot told me that he had been witnessing the development of some larvae which he believed to be *B. philenor* on the *Aristolochia duria* that was attached and growing on his porch. I was very skeptical and quite busy at the time, so I did not investigate. A week later, however, he delivered a single live chrysalis and a cluster of empty ova to me; and indeed, he was correct! The adult emerged on August 12, was photographed, and subsequently released. Gray later discovered two more empty chrysalids, which he turned over to me.

Perhaps we are witnessing a northern expansion of this beautiful insect's range; I am looking forward to keeping an eye on what may develop on the *Aristolochia* this year.

Bruce W. King
Easthampton, MA

**JOHN G. FRANCLEMONT ELECTED
NEW HONORARY LIFE MEMBER**

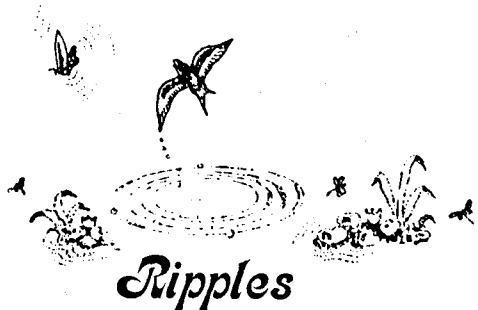
John Franclemont was born April 15, 1912 in Buffalo, New York. He received B.S. and Ph.D. degrees from Cornell University, where he was a student of W.T.M. Forbes. Following his service as an Entomologist in the U.S. Army during 1942-1946, he worked with the U.S.D.A. Division of Insect Identification in the U.S. National Museum from 1947 to 1952. He joined the faculty at Cornell University in 1953, and retired as Professor of Insect Taxonomy in 1977, but has continued to serve as advisor for graduate students and teach courses in his emeritus position.

Prof. Franclemont's research has been concerned with taxonomy, classification, and life histories of American Lepidoptera, especially Noctuoidea. He has authored more than 65 publications, which include many notable contributions to taxonomy (e.g., sections in Parts II-IV of *Forbes's Lepidoptera of New York and Neighboring States*), and to nomenclature (e.g., the proposal to suppress *Phalaena* and validate the subgeneric names of *Noctua*, *Geometra*, etc.). He is a member of the Board of Editors for the *Moths of North America* series; he authored the *Mimallonidea* and *Bombycoidea fascicle*, and co-authored the noctuid section of the recent Checklist.

Prof. Franclemont has had a major influence on the science of lepidopterology as a teacher and academic advisor. At least 10 of his former students are engaged at present in systematic research on various Lepidoptera, a large number are involved in ecological and behavioral studies, and many of these are now advising other students in research on Lepidoptera.

His love of collecting and rearing has resulted in the premier private collection of Noctuoidea. His collection is especially strong in series reared from eggs of field collected females. Prof. Franclemont spent two sabbaticals and several summers in Arizona, and made several shorter field trips to North Carolina, Florida, and other states. These field trips were training grounds for many of his students.

John G. Franclemont is a charter and sustaining member of the Lepidopterists' Society, for which he has served as a member-at-large on the Executive Council, Secretary, and President. He is a member of numerous other professional societies, and he was selected as a Fellow of the Entomological Society of America in 1985.



Jo Brewer, Ed, 257 Common St, Dedham, MA 02026

Dear Jo:

I write this concerning the use of scientific words in articles in the NEWS of the Lepidopterists' Society. These words appear less frequently in the NEWS than in the JOURNAL. Several times I have not found words in the dictionary or entomology textbooks such as those written by Borror and Comstock, and others. I have botany books by Britton & Brown and Grays 8th edition botany manual. When I can't find a botanical or entomological word in these books there is something wrong.

If words or names are invented by authors at the writing of an article, then I think it is up to them to explain or write in a language everyone can understand.

If someone proof reads articles to be published, certainly they must realize what may not be understood by everyone.

The first article in the March 1987 issue of the JOURNAL had 3 words and 3 species of *Asclepias* that I could not find. There is no entomologist to consult in Toledo, and I question finding a botanist to explain anything, but why should I have to do this when it could be avoided?

I have given many slide shows on the subject of entomology, but I would never use any words not understood by the audience unless I explain their meaning.

I suggest you ask some knowledgeable person to write a column for the NEWS explaining the technical words or terms that may turn up in future articles.

Glenn Firebaugh

[Good ideal-Jo]



Research Notices

● I have been studying the distribution and biology of *Papilio indra* in Utah for nearly 7 years, and for the last 3 years have been emphasizing *P. indra minori* and *kaibabensis* throughout their entire range of Utah, Colorado, N. Mex. and Arizona. I am also looking at distribution, use, and preference of their various larval food plants, along with distributional changes in larval parasites, and the frequency of parasitism for these *indra* races between localities throughout their entire range. I plan to continue this work for maybe 2 more seasons, depending upon my success this field season.

I am interested in correspondence with anyone who has ever collected *minor* and/or *kaibabensis*, either adults or immature stages. Information on food-plants or parasites will be helpful. I need information for the following areas: UTAH - Kane Co. (esp. north half), Garfield Co. (esp. south half) and San Juan Co.; ARIZONA - Coconino Co. (Jacob Lake area, No. to Utah border), Navajo Co., and Apache Co.; N. MEXICO - northwest part (except L.A.Co. Museum specimen) (only 1 verifiable record known for the state - so far); COLORADO - Montezuma Co., La Plata Co., Dolores Co., and San Miguel Co.

It is "rumored" that *P. indra* has been collected in or near Bryce Canyon National Park, Utah. Please write if you know anything about this record!

Thank you for your assistance. Contributors will be acknowledged in future publications. Write to: Wayne H. Whaley, Dept. of Zoology, 574 WIDB, Brigham Young University, Provo, Utah 84602.

● Wanted: Correspondence with anyone collecting, rearing or commonly encountering any heliothine noctuids (except *Heliothis virescens* and *Helioverpa zea*). For our molecular and morphological systematic studies on the subfamily, we are seeking information on local abundance of species. We also seek cooperators who might be willing to provide live material; we would cover shipping and associated expenses. Investigators are Robert Poole (USDA c/o National Museum of Natural History), Milton Huettel (USDA Beltsville, Maryland), Charles Mitter; contact: Mitter, at the Department of Entomology, University of Maryland, College Park, Maryland 20742.

● WANTED: Correspondence with any member who has information concerning the Jamaican moth fauna, or who has collected moths in Jamaica. Matthew J. C. Barnes, Dept. of Zoology, University of the West Indies, Mona, KINGSTON 7, JAMAICA W.I.

Notices



SUMMER POSITION OPEN

Field Biologist. 17 week position available for current graduate student to prepare an ecological management plan for Massachusetts Audubon's Canoe Meadows Wildlife Sanctuary in Pittsfield, MA. Applicants should be independent workers, experienced in field sampling techniques, familiar with New England natural history, and skilled in preparing reports and maps. Knowledge of lepidoptera and strong botanical background preferred. Stipend provided, own transportation needed. Work/study preferred. Closing date: when filled. Starting date: May, 1988. EOE. Please send cover letter and resume listing references to: Jeanne Anderson, Massachusetts Audubon Society, South Great Road, Lincoln, MA 01773.

FREE PUBLICATIONS CATALOGUE AVAILABLE

A new, free catalogue listing more than 200 publications on anthropology, history, entomology, botany, zoology, geology and paleontology is now available from the New York State Museum. These in house publications include old classics such as "Myths and Legends of the New York State Iroquois" by Harriet M. Converse and Arthur C. Parker along with modern works such as "Electronic Bedrock Map of New York State" by James R. Albanese. To obtain the free catalogue write to Publication Sales, New York State Museum, 3140 CEC, Albany, New York 12230.

FIELDCREW SUMMER POSITIONS AVAILABLE

Ecological Inventory Fieldcrew: Massachusetts Audubon Society, Lincoln, MA. Crew members include 2 botanical interns, 2 invertebrate ecology interns, 2 vertebrate ecology interns and 1 draftsman. Travel statewide to assist a variety of ecological inventory and monitoring projects on Massachusetts Audubon sanctuaries. Experience and strong skills needed in one of the following areas: mapping; botany, particularly Massachusetts flora; small mammal studies; birding, or entomology, particularly lepidoptera. Applications for all 7 positions should be upper level undergraduates or graduate students, familiar with sampling techniques and the ecology of Massachusetts. Housing and stipend provided. Own transportation required. Starting date for botanical fieldcrew: June 13, 1988 for 11 weeks. Starting date for all other positions: May 2, 1988 for 17 weeks. Closing date: when filled. Interviews will begin after March 14, 1988. EOE. Send cover letter and resume to Jeanne Anderson (plants, mapping) or Nancy Sferra (all others), Conservation Department, Massachusetts Audubon Society, Lincoln, MA 01773.

1988 ELECTION RESULTS

Members cast a total of 511 ballots in the Society's 1988 election, representing a return of approximately 33%. Results are tabulated below, with the successful candidates indicated by an asterisk (*). All newly elected officials will assume office in July at the Annual Meeting hosted by the Carnegie Museum in Pittsburgh. Of particular note is the election of Dr. John G. Franclemont, noted lepidopterist from Cornell University, to honorary life membership status.

The Society extends its congratulations to the

winners and thanks to all candidates for their willingness to serve the Society.

PRESIDENT ELECT (1)

*Julian P. Donahue	326
Jacqueline Y. Miller	182
abstentions	3

VICE PRESIDENTS (3)

P. T. Dang	231
*John N. Eliot	348
*George W. Gibbs	338
*Ron Leuschner	447
abstentions	28

EXECUTIVE COUNCIL MEMBERS-AT-LARGE (3)

*John W. Brown	226
Steven J. Cary	196
Robert C. Lederhouse	221
*Mogens C. Nielsen	318
*Floyd W. Preston	246
John A. Shuey	203
abstentions	24

KARL JORDAN MEDAL REPRESENTATIVE (1)

*J. Donald Lafontaine	419
abstentions	92

HONORARY LIFE MEMBERSHIP FOR DR. JOHN G. FRANCLEMONT

(requires approval by at least 80% of members voting)	
*Yes	481(94.1%)
No	12
abstentions	18

OFFICERS OF THE SOCIETY ARE NOW AS FOLLOWS:

Through 17 July 1988:

President	Jerry A. Powell
President-Elect	Julian P. Donahue
Immediate Past President	Douglas C. Ferguson
Vice Presidents (3)	Jacqueline Y. Miller Atuhiro Sibatani Jean-Francois Landry

After 17 July 1988:

President	Julian P. Donahue
Immediate Past President	Jerry A. Powell
Vice Presidents (3)	John N. Eliot George W. Gibbs Ron Leuschner

Full Calendar Year

Secretary	Richard A. Arnold
Assistant Secretary	Julian Donahue
Treasurer	James P. Tuttle
Assistant Treasurer	Eric Metzler
Publications Coordinator	Ron Leuschner

EXECUTIVE COUNCIL MEMBERS-AT-LARGE:

(term expires at annual meeting in year indicated)

1988

Mirna Martins Casagrande
Edward C. Knudson
Fredrick W. Stehr

1990

Julian P. Donahue
John E. Rawlins
Jo Brewer Winter

1989

M. Deane Bowers
Richard L. Brown
Paul A. Opler

1991 (assume office

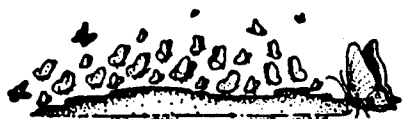
17 July 1988)
John W. Brown
Mogens C. Nielson
Floyd W. Preston

EDITORIAL COMMITTEE:

JOURNAL Editor	William E. Miller
NEWS Editor	June D. Preston
MEMOIRS Editor(Chairman)	Charles V. Covell, Jr.

INTERNSHIPS AVAILABLE

The Lloyd Center for Environmental Studies is seeking interns for the summer and fall sessions to assist with a continuing light-trap survey and to help develop and conduct population and distributional studies of state-listed rare Lepidoptera (Massachusetts). Housing, project-related expenses and a living stipend are provided to interns. Applicants should have completed their sophomore year in college. Starting dates are May 16 and September 6. For information contact Mark J. Mello, Research Coordinator, Lloyd Center for Environmental Studies, Box 7037, South Dartmouth, MA 02748.



Forthcoming Meetings

FIRST INTERNATIONAL ENTOMOLOGICAL TRADE FAIR

FRANCE ENTOMOLOGIE is sponsoring, on Dec 17 and 18, 1988, the first International Entomological Trade Fair of Paris at the Hotel Pullman, 17 Boulevard Saint-Jacques, 75014 Paris, France. A large international attendance is anticipated. Very reasonable nearby accommodations are available. Display space will be allocated according to the time of receipt of completed registration forms. Those wishing to reserve display space or to arrange for accommodations should write for prices and registration forms to FRANCE ENTOMOLOGIE, 18 Sente des Chataigniers F-92380 Garches, France.

39th ANNUAL MEETING OF THE LEP. SOCIETY

The Carnegie Museum of Natural History will host the 39th Annual Meeting of the Lepidopterists' Society from July 14 to July 17, 1988, in Pittsburgh, Pennsylvania. See pg 87, NEWS #6, 1987 and pg 11, NEWS #1, 1988 for information and registration forms. Registration packets with all necessary information are being sent to members upon receipt of their completed registration forms.

PACIFIC SLOPE SECTION MEETING

The 1988 meeting of The Pacific Slope Section of the Lepidopterists' Society is being held at the Pikes Peak Research Station near Florissant, Colorado from Friday afternoon, July 8 till noon on July 10. All members with zip codes of 80000 or greater will be contacted. Others interested should contact Dr Boyce Drummond, Pikes Peak Research Station, Colorado Outdoor Education Center, Florissant, CO 80816 or phone (303) 689-2025 for more information. Also see NEWS #1, 1988, pg 11.

14th ANNUAL XERCES SOCIETY MEETING

The Pikes Peak Research Station near Florissant, Colorado is the site of the 14th Annual Xerces Society Meeting from Tues evening June 21 through Saturday June 25, 1988. See NEWS #1, 1988, pg 11 for additional information.

New Members



AUSTIN, STEPHEN: 11673 East Bryant Road, El Monte, CA 91732-2203.

BARNEY, BLAISE: 101 Grove Road, Ithaca, NY 14850.
BASTIANELLI, JOHN: P.O. Box 662, Loxahatchee, FL 33470-0662.

BIEBER, LUBOS: Zavist 436, 679 22 Lipuvka, CZECHOSLOVAKIA.

BUSCHING, MILAN K.: Insect World, Cincinnati Zoo, 3400 Vine Street, Cincinnati, OH 45220-1333.

BUZEK, JIRI: Zadverice 254, okr Gottwaldov, 76312 Vizovice, CZECHOSLOVAKIA.

CHENG, KAM WOR: 502 Jalan Permatang Rawa, 14000 Bukit Mertajam, Penang, MALAYSIA.

COUGHLIN, CAROLYN: 9427 244th Street SW, #D303, Edmonds, WA 98020.

CRICKSHANK, ALAN: 27a Richmond Hill, Richmond, Surrey TW10 6RE, ENGLAND.

DUDLEY, ROBERT (Dr.): Smithsonian Tropical Research Institute, APO Miami, FL 34002-5000.

GORMAN, LARRY R.: Rural Route 02, Box 321, Inola, OK 74036.

GRIEPPENTROG, ELMER L.: Elsie Route, Box 740, Seaside, OR 97138.

HALL, STEPHEN: London Butterfly House, Syon Park, Brentford, Middlesex TW7 5N, ENGLAND.

HUNTER, ALAN: 5232 Longridge Road, Jamesville, NY 13078.

KEGLEY, JON: 19536 Brindle Pony Road, Penn Valley, CA 95946-9302.

KNIGHT, HELEN: 315 Collingwood Drive, Kamloops, British Columbia V2B 6B4, CANADA.

MARTIN, JULIE ANN: Dept. of Entomology, Louisiana State University, Baton Rouge, LA 70803.

MCCARTHY, MARY C.: Connecticut Valley Biological Supply Company, 82 Valley Road, P.O. Box 326, Southampton, MA 01073.

McLEOD, DAVE: 92 Stroud Circle, Unit 48, London, Ontario N6E 1Y8, CANADA.

MILLER, ANDREW S.: 113 Loma Verde Drive, Hayward, CA 94541-1369.

MYERS, JOE: 1412 Doten Avenue, Columbus, OH 43212.

OLIVARES, JAVIER: P/Gran Capitan No. 1, Granada 18002, SPAIN.

ONARAN, M. OKTAY: Havaci Muzaffer Erdonmez Sk, No. 12/5 Basak Apt. Kat 1, Hesilkoy, Istanbul, TURKEY.

PICKNELL, DALE: 11 Center Street, P.O. Box 203, Wells River, VT 05081-0203.

ROUILLARD, MARC: 1930 Oliver Street, Memphis, TN 38104.

SNOW, MICHAEL E.: Apartado 73, Siquirres 7200, COSTA RICA.

ST. JOHN, DENNIS (Dr.): RR #3, Site 17 C11, Penticton, British Columbia V2A 7K8, CANADA.

VELEZ ESTRADA, JESUS H.: Museo de Historia Natural, Universidad de Caldas, Apartado Aereo 275, Manizales, Caldas, COLOMBIA.

WELLS, GRAHAM NORMAN: 71 Wagensveldt Street, Kingston, Brisbane 4114, AUSTRALIA.

WHALEY, CONNIE L.: Wymount Terrace 8-B, #477, Provo, UT 84604.

Address Changes



ANDERSON, CHRISTA L.: 283 La Fontenay Drive, Louisville, KY 40223.

BRAUN, MICHAEL P.: Rural Route 06, Box 2, Springfield, TN 37172.

CALLAGHAN, CURTIS J.: Rua Yeddo Finza 595, Independencia, Petropolis, Rio de Janeiro, BRASIL.

CALLOWAY, KAREN M.: 3384 Elm Avenue, Long Beach, CA 90807-4437.

CHILCOTE, CHARLEY A.: 8420 Strawberry Lake Road, Dexter, MI 48130.

DOMHOSE, PETE J.: 407 Rutile Way, Henderson, NV 89015.

DUNLAP, CARLOS L., Jr.: P.O. Box 790, Fall River Mills, CA 96028-0790.

GARDNER, KARL R.: 140 Deysher Road, Fleetwood, PA 19522.

GENTILI, PATRICIA: Centro Regional Universitario Bariloche, C.C. 1336, 8400 San Carlos de Bariloche, Rio Negro, ARGENTINA.

GIBSON, LORAN D.: 8496 Pheasant Drive, Florence, KY 41042.

GILLMORE, RICHARD: 146 Clear Lake Circle, Sanford, FL 32771.

HESTERBERG, RICHARD L.: 5192 NE 6th Avenue, #832, Oakland Park, FL 33334.

HOOPER, JEFFREY D.: 5397 Paddy Court, Norton, OH 44203.

HORTON, DON: 5902 Kirkwood Place North, Seattle, WA 98103.

KOHALMI, LESTER: 343-670 Dalhousie Drive, Winnipeg, Manitoba R3T 2Z9, CANADA.

KRAUSS, R. W.: P.O. Box 427, Crescent City, CA 95531-0427.

MacPHERSON, BRUCE N.: Casilla 38, 4500 San Pedro de Jujuy, ARGENTINA.

McDERMOTT, JAMES: Rural Route 01, Box 1068, Kaufman, TX 75142.

McHENRY, VICTOR B.: 62866 Montara Drive, Bend, OR 97701.

MERRITT, JAMES R. (Prof.): 1729 South 3rd SE, Louisville, KY 40208.

MILLER, DONALD G.: P.O. Box 98, South Woodstock, CT 06267.

MILLER, THOMAS A.: USA Biomed R & D Laboratory, Fort Detrick, MD 21701-5010.

NILSSON, JAN A.: c/o Dept. of Biological Sciences, Box 5640, University of North Arizona, Flagstaff, AZ 86011.

O'HARA, BRUCE A. (Dr.): 24211 Cross Street, Newhall, CA 91321-3509.

OLSON, WALTER L.: 7960 Hidden Harbour Drive East, Holland, OH 43528-9569.

PFEILER, EDWARD J.: Department of Biology, University of Puerto Rico, Mayaguez, PR 00708.

PLANT, RANDALL: 7637 Ambrose Way, Sacramento, CA 95831.

PRIEST, RONALD J.: 5464 Jo Pass, East Lansing, MI 48823.

QUALIS, JERRY A.: 825 Lorraine Court, Pasadena, TX 77506.

RAGUSO, ROBERT: P.O. Box 9194, Stanford, CA 94305-0248.

RAMOS, STUART J.: College Station, Mayaguez, PR 00708.

RASANEN, EINO: Kuivinnientie 21, 70400 Kuopio 40, FINLAND.

RICHERSON, JACK D.: 1250 Chippewa Trail B.H., Chesterton, IN 46304.

ROBB, JEFFREY B.: 2515 Rockwood, Denton, TX 76201.

RUSSELL, BETH (Mrs.): 5135 North Placita Solitaria, Tucson, AZ 85715.

SALA, FRANK P.: 3493 Greenfield Place, Carmel, CA 93923-9415.

SHOTTS, MACK (M.D.): 514 West Main Street, Paragould, AR 72450.

SIDMAN, DAVID: 11 South Oxford Street, Brooklyn, NY 11217-4105.

SIMMONS, TIM: R.F.D. Box 504-A, Vineyard Haven, MA 02568.

SWANK, CHARLES K.: 10906 Kirkbrush, Houston, TX 77089-3104.

TURNER, JON D. (M.D.): 120 Governor's Drive, Suite 201, Huntsville, AL 35801.

WATKINSON, IAN A.: 63 Raphael Road, Mockessin, DE 19707.

WIKER, JAMES R.: Rural Route 02, Box 31, Athens, IL 62613.

The Market Place

Buy • Sell • Exchange • Wants



Items submitted for inclusion in this section are dealt with in the manner set forth on page 9 of the Jan/Feb 1988 NEWS. Please note that in keeping with the guidelines of the Society, henceforth no mention of any

species on any threatened or endangered species list will be accepted in these items. This will include all Ornithopterans now and for the foreseeable future. Items will be accepted from members only and will be printed only once unless entry in the maximum of two successive issues is requested. Please keep items short. A maximum of 100 words is allowed. SASE calls for a self addressed stamped envelope.

The Society, as always, expects all notices to be offered in good faith and takes no responsibility for the integrity of any advertiser. Any disputes arising from such notices must be resolved by the parties involved outside of the structure of the Society.

FOR SALE OR EXCHANGE: Live pupae of *Iphiclides podalirius*, *Callosamia promethea*, *Philosamia cynthia*, *Hyles gallii* and *Sphinx ligustri*, also some Mantid egg cases. Contact Kenneth R. Knight, 433 Brady N.W., Comstock Park, Michigan 49321 or phone (616) 784-6243.

ATTENTION COLLECTORS: Prepare for your '88 collecting season now with good quality butterfly envelopes, cedar spreading boards, etc. in different sizes and styles. Please send SASE for complete price list. **ALSO WANTED:** Overwintering pupae of *P. polyxenes*, *A. io*, *H. eglantaria*, *E. imperialis*, *S. chersis*, *P. modesta*, *M. quinquemaculata*, *M. sexta*. Will buy or exchange for spring ova of various Saturniidae and Sphingidae. Please send price list and/or wants to: Chris Schmidt, Box 11, Didsbury, AB T0M 0W0, CANADA.

WANTED: Progeny (eggs, larvae) or living ab's of *Euphydryas chalcedona* for initiating an experimental stock. I can support stock that can live on *Diplacus* and/or *Scrophularia*. Will pay postage. Raymond R. White, 788 Mayview Ave., Palo Alto, CA 94303-4549 or phone (415) 493-5070.

WANTED: Brown, Eff, & Rotger, *Colorado Butterflies*; Burns, *Evolution of skipper butterflies in the genus Erynnis*, Univ. Cal. Publ. Ent. No. 37 (1964); MacNeill, *The skippers of the genus Hesperia...*, Univ. Cal. Publ. Ent. No. 35 (1964). **FOR SALE:** Photocopy of Davenport, *The butterflies of the satyrid genus Coenonympha*, Bull. MCZ No. 87, \$13 ppd. Steve Goldstein, 99 Charles Street, Reading, MA 01867.

FOR SALE: I will again be offering ova of the Saturnid moths *P. cynthia*, *A. luna*, *H. cecropia*, *C. angulifera*, *C. promethea*, *E. imperialis*, *C. regalis*, and others. SASE for list. Jeff Frey 364 Oaklyn Road, Lebanon, PA 17042.

FOR SALE OR TRADE: *P. bairdii*, *S. idalia*, and a few other Nebraska specimens. Steve Spomer, 1235 N. 50th, Lincoln, NE 68504.

FOR SALE: Books, mainly butterflies but some other orders and mosses. All very good to new condition and cheap. SASE for list and prices. Lloyd Ryan, 20218 Skylark Dr, Sun City West, AZ 85375 or phone (602) 584-5992.

WANTED: Contact with Florida collectors. Will exchange northern New England butterflies for Florida species, as my collection of southern material has many gaps that need filling. Offerta list supplied on request. Warren J. Kiel, 6 Blackstone St., Whitefield, N.H. 03598.

FOR EXCHANGE: Butterflies from Philippine Islands of Negros and Panay, including uncommon and rare species like *Elynnias kanekoi* pair, *Polyura schreiberi*, *Euploea toberi*, *Parantica davidi*, *Appias remedios* and others. **WANTED:** South American Papilionidae (esp. *Parides* and *Eurytides*) from unusual areas like Guyanas, Venezuela, Bolivia, Eastern amazonian Peru, eastern Colombia, with full data. Al quality not mandatory. Dr Bollino Maurizio, Via Regina Elena 22, 73100 Lecce, Italy.

WANTED: Any of the Pyraloidea volumes of "moths of North America" to buy second-hand or exchange for Jamaican material (but not *P. homerus* or any other endangered species!) Matthew Barnes, Dept. of Zoology, University of the West Indies, Mona, Kingston 7, JAMAICA, W.I.

WANTED: Specimens of Celastrina ladon (C. argiolus) from anywhere in North America. Also interested in data and field notes on this butterfly. Can exchange butterflies from Missouri. Anyone interested in collecting C. ladon for me in 1988, please write Harry Pavulaan, P.O. Box 20202, Affton, St. Louis, MO 63123 Phone (314)-638-4704.

FOR SALE OR EXCHANGE: Samia cynthia cocoons. Send SASE for price. If desiring an exchange, send your offer. Will exchange for other livestock or papered specimens of Rhopalocera, Saturniidae, Catocala, or Spingidae. Thomas Greager, R.D. #6, Box 56-B, Greensburg, PA 15601.

FOR SALE: 9 picture frames of Butterflies, Moths and Dragonflies and also Damselflies that I mounted myself. I will only sell all nine frames as a set. Most of them are in good shape. There are over 100 species in the 9 frames. Please send a S.A.S.E. for reply. ALSO FOR SALE OR EXCHANGE: Ova of Actias luna, Antheraea polyphemus, Callosamia promethea, Hyalophora cecropia, Hyalophora euryalis and a few others. S.A.S.E. Please to: Mark A. Howe, RR #1, Box 217, Lake Village, IN 46349 U.S.A.

FOR SALE: Ova of H. cecropia, A. polyphemus, A. luna, H. columbia and C. promethea. Also, literature on how to rear them. Still have some stock of H. cecropia cocoons available. Send SASE for price list to Dr. Gardiner E. Gregory, Star Route 79, Box 259, Orland, Maine 04472.

FOR SALE: Papilio arcturus (pairs) and many more interesting species. Bred pairs of Papilio bairdii (forms brucei & bairdii) from Utah are still available. For other rare species write for list of "Hard-to-get Lepidoptera of the World." Send SASE to Wayne H. Whaley, Wymount Terrace 8B-477, Provo, Utah 84604, U.S.A.

FOR SALE: Available in Summer 1988, 40-50 species of western Montana butterflies, as well as some moths. For a complete list of the species I expect to have available and a price list, write soon to Craig Odegard, 7385 Beryl Lane, Missoula, MT 59801.

BOOK WANTED: Illustrations of the North American Species of the Genus Catocala by Barnes and McDunnough. State condition and price. Mack Shotts, #1 Med. Drive, Paragould, Arkansas, 72450.

FOR SALE: Catalogue of Lycaenidae & Riodinidae (Lepidoptera: Rhopalocera), by Bridges (1988, 811 pp, 8.5 x 11 in., hardbound). A six-part catalogue of 16475 species-group names in these two families. The bibliography lists more than 4000 publications. Published by, and available from, the author, Charles A. Bridges, 502 W. Main, #120, Urbana, Illinois, 61801.

WANTED: The following books and publications. The Butterflies of the West Coast by W.G. Wright, On the Spingidea of Peru by A.M. Moss, Butterflies of Cuba by D. Marston Bates, "Monograph of the Genus Erebia" by B.C. Warren, Butterflies of the Australian Region, and Birdwings of the World by D'Abrera. State condition and price. ALSO FOR SALE: Bait traps and light traps. For information and prices Contact Leroy C. Koehn, 2848 N.W. 91st Ave., Coral Springs, Florida 33065. Telephone (305) 344-3873 (home) or (305) 392-3900 (work).

FOR EXCHANGE: I have most eastern and several western species of North American butterflies for trade. Most interested in western and Arctic species. Send want/trade lists to Ron Gattelle, 126 Wells Rd., Goose Creek, SC. 29445.

WANTED: Contacts for exchange of butterfly specimens. I desire contact from all parts of the world, including North America, and can offer same in exchange. Interested in all families, but especially Papilionidae, Nymphalidae, Pieridae, and Heliconiidae. Both commoner and rarer species are of interest. Please write: all letters will receive a reply. Also seeking BOOKS: Talbot's Delias monograph; D'Almeida 1966 S.A. Papilio catalogue; Rothschild's 1895 Revision of Papilios of Eastern Hemisphere. Contact Danny Burk - Box 403 - Mishawaka, IN 46544; phone (219) 255-5037 evenings/weekends.

WANTED: To buy ova and pupae of tropical Heliconius species, particularly Heliconius charitonius and other families as well. Please contact Alex Kerstitch, 10700 E. Calle Vaqueros, Tucson, Arizona 85749 USA, Phone (602) 749-5000 X3215.

MEMBERS' COMMERCIAL NOTICES.....

APOLLO BOOKS, LUNDBYVEJ 36, DK-5700 SVENDBORG, DENMARK. The Lepidopterists' bookseller. THE LEPIDOPTERA OF GREENLAND. By N.L. Wolff. 1964. 28 x 18 cm. 74 pages + 21 half tone pages. 55 text figs. The only book on all lepidoptera from Greenland. A scientific work of the highest standard. Published by the Danish Ministry of Greenland. Price DKK (Danish Kroner) 120. Also available: DIE BOMBYCES UND SPHINGES DER WESTPALAEARKTIS. One of the most important books on European moths of many years. Ask for a free colour prospect. DKK 1,790. Butterflies of the World. Neotropical Region. Vol. 3. DKK 1,190. Prices are excl of postage. HAVE YOU GOT YOUR PERSONAL COPY OF OUR 32-PAGES 1987/88 CATALOGUE? IF NOT, PLEASE ASK FOR A FREE COPY.

TRANSWORLD BUTTERFLY COMPANY (LS), Apartado 6951, San Jose, COSTA RICA, Central America. NEW SPRING CATALOG includes additional Morpho, Papilionidae and other Lepidoptera from many countries. Extensive Morpho listing. European butterflies. State interests when writing. GENUS MORPHO PART 1 (P. Blandin) available. NEW 1988 COLLECTING PROGRAM IN COSTA RICA - brochure on request. Send \$1 for Catalog or \$6 for years monthly catalogs/newsletters by airmail.

FLORA AND FAUNA BOOKS, P.O. Box 15718, Gainesville, FL 32604, USA. Complete natural history book service. All new book list prices reduced 5% or more. Current sale items (until July 31, 1988): Covell, Field Guide to Moths, \$8.95 (pap.); DeVries, Butterflies of Costa Rica, \$16.96 (pap.); Douglas, Lives of butterflies, \$38.95; D'Abrera, Butterflies of S. Am., \$16.95 (pap); Ferris/Brown, Butterflies of Rocky Mts., \$14.50 (pap.); Gerberg/Arnett, Butterflies of Florida (6/88), \$8.75 (pap); Klots, FG to Eastern Butterflies, \$8.95 (pap); Opler/Krizek, Butterflies East of Great Plains, \$39.95; Scott, Butterflies of N. Am., \$39.95; Shull, Butterflies of Indiana, \$19.95; Tilden/Smith, FG to Western Butterflies, \$9.95 (pap); Heitzman, Butterflies & Moths of Missouri, \$9.95 (pap); Miller, Oaks of N. Am., \$9.95 (pap). Postage/handling extra (\$1, plus 50c/book). Individuals please prepay. Ask for free catalogs.

WORLD OF NATURE IMPORTS, P.O. Box 14570, Madison, Wisconsin 53714-0570 FOR SALE: Lepidoptera and Coleoptera from all parts of the world. Many rare and uncommon species offered. Free price list sent on request.

CONNECTICUT VALLEY BIOLOGICAL SUPPLY CO, P.O. Box 326, Southhampton, MA 01073. WANTED TO BUY: Cocoons containing living pupae of polyphemus, cynthia, luna, promethea, cecropia or other native Saturniid moths. Lots of 100 or more preferred. Interested breeders may contact us at above address.

MARYLAND ENTOMOLOGICAL SOCIETY, c/o W. Andersen, 220 Melancton Ave, Lutherville, MD 21093. FOR SALE: American Wildlife Stamps on special First Day Covers. Cachet is colorful butterfly logo of the Maryland Entomological Society and for its benefit. Also sets of 10 different covers with special National Parks cancellations available. For prices send SASE to above address.

IANNI BUTTERFLY ENTERPRISES, P.O. Box 81171, Cleveland, Ohio, 44181. Telephone: (216) 888-2310. Worldwide butterflies, moths and beetles for all price ranges. Superior quality, double boxed for shipping safety. Personalized service to the beginning or seasoned collector. Specializing in Papilio, Morpho and Heliconius. ALSO excellent quality insect mounting pins including standard black, Elephant, Stainless Steel. Best prices available. Send \$5.00 U.S. for one year price list subscription.

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DEADLINES: Material for the Jan/Feb issue should reach the NEWS EDITOR by Dec 1 of the previous year, and that for the Mar/Apr issue by Feb 15, for the May/June issue by Apr 1 and for the July/Aug issue by May 1, the Sept/Oct issue by Aug 15 and the Nov/Dec issue by Oct 15. Reports for the SEASON SUMMARY must reach the ZONE COORDINATORS listed on the front cover no later than the 5th of January. NEWS EDITOR is June Preston, 832 Sunset Dr, Lawrence, KS 66044, USA. RIPPLES EDITOR is Jo Brewer, 257 Common St, Dedham, MA 02026, USA.

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INFORMATION ABOUT THE SOCIETY.....

Membership in the Lepidopterists' Society is open to all persons interested in any aspect of Lepidopterology. Prospective members should send the TREASURER, James P. Tuttle, 3838 Fernleigh Ave, Troy, Michigan 48083, the full dues for the current year, \$25.00 US, together with mailing address and a note about areas of interest in the Lepidoptera; student membership (must be certified) \$15; sustaining membership \$35; life membership \$350. Remittances must be in US dollars, payable to the Lepidopterists' Society. All members will receive the JOURNAL (published quarterly) and the NEWS (published bimonthly). A biennial membership directory will comprise the last issue of the NEWS in even-numbered years.

Changes of address (permanent ones only), Additions or Changes in Telephone Numbers or Areas of Interest and Information about Mailing List Rental: Contact the ASSISTANT SECRETARY, Julian P. Donahue, Natural History Museum of Los Angeles County, 900 Exposition Blvd, Los Angeles, California 90007, USA.

Information on Membership and other aspects of the Society must be obtained from the SECRETARY, Dr. Richard A. Arnold, 50 Cleveland Rd, #3, Pleasant Hill, California 94523, USA.

Requests for Missed Issues (i.e. those not delivered although dues have been paid on time) should be sent to the TREASURER, James P. Tuttle, address above, or the PUBLICATIONS COORDINATOR, Ron Leuschner, address below. Defective issues will also be replaced by the TREASURER. Do not request these of the NEWS editor.

Manuscripts submitted for publication in the JOURNAL are to be sent to Dr. William E. Miller, EDITOR, JOURNAL of the Lepidopterists' Society, Department of Entomology, University of Minnesota, St. Paul, Minnesota 55108, USA. See the inside back cover of a recent issue of the JOURNAL for editorial policies.

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AVAILABLE PUBLICATIONS OF THE SOCIETY..... Order from the PUBLICATIONS COORDINATOR, Ron Leuschner, 1900 John St., Manhattan Beach, CA 90266, USA.

CATALOGUE/CHECKLIST OF THE BUTTERFLIES OF AMERICA NORTH OF MEXICO (Memoir No. 2), Lee D. Miller & F. Martin Brown: includes references to original descriptions and location of type specimens. Members and subscribers, \$10 cloth, \$5 paper; non-members, \$17 cloth, \$8.50 paper, postpaid.

COMMEMORATIVE VOLUME, 1947-1972: a 25-year review of the Society's organization, personnel, and activities; biographical sketches; JOURNAL 25-year cumulative index by author, subject, and taxon; clothbound. Members and subscribers, \$6; non-members, \$10, postpaid.

1986 MEMBERSHIP DIRECTORY (current to November 1986). Biennial directory of members and their addresses, with geographic and interest indices. Not available for commercial use. (NEWS #6 for 1986). \$5.00 postpaid.

BACK ISSUES of the JOURNAL and of the NEWS of the Lepidopterists' Society. For a list of the available issues and their cost, postpaid, send a SASE to the SECRETARY or to the PUBLICATIONS COORDINATOR.