

NEWS

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USA

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ZONE 1 SOUTHWEST: ARIZONA, NEVADA, CALIFORNIA. Coordinator: R. L. Langston (RLL). Contributors: R. L. Allen (RA), R. A. Bailowitz (RB), R. M. Brown (RMW), Jim and Joan Coleman (J-JC), K. Davenport (KD), J. F. Emmel (JE), C. D. Ferris (CDF), G. A. Gorelick (GG), C. Hageman (CH), K. Hansen (KH), R. V. Kelson (RK), T. W. Koerber (TK), R. H. Leuschner (RHL), D. Marion (DM), Eileen and S. O. Mattoon (E-SM), R. O'Donnell (RO), D. Parkinson (DP), F. P. Sala (FS), A. M. Shapiro (AS), O. Shields (OS), R. J. Skalski (RS) and W. L. Swisher (WS).

COUNTY, STATE (in caps.) = new county, state records. NORTH, SOUTH, HIGH, LOW, EARLY, LATE, etc. (in caps.) are also considered records by the contributors and/or the coordinator.

ARIZONA. No new COUNTY records or range extension for 1982. Most data was from the well-collected southeastern part of the state. Transients were hampered by cold, wet weather in Apache Co., Coconino Co., Cochise Co., Aug. (CDF), with heavy rains in Cochise Co., Sept. (RHL). Windy, cold and rainy in Pima Co., Sept. (RHL). No migrations were reported from Arizona.

MOths: Spingidae: Xylophanes falco, Cave Creek area, Chiricahua Mtns., Cochise Co., 9-11 Aug. (CDF). Saturniidae: Agapema galbina anona cocoons, Sonoita Hwy. 82, 5 mi. W. Jct. Hwy. 90, Cochise Co., 15 Oct. (J-JC). A. g. anona, Automeris randa and Anisota oslari caterpillars, 1 mi. up Guadalupe Cyn., Cochise Co., 16 Oct. (J-JC). Arctiidae: Phaegoptera astur arizonensis, Hemihyalea edwardsi, Leucanopsis lurida and Arachnis picta, Cave Cr. area, 9-11 Aug. (CDF). Noctuidae: Antiplaga hachita and A. dimidiata, Ash Cyn., Cochise Co., 8-9 Sept. (RHL). Amphipyra pyramidoides, Magusa orbifera and Fenaria sevorsa, Cave Cr. area, 9-11 Aug. (CDF). Nerastria cnossia, Catalina Mtns., 2000', Pima Co., 10 Sept. (RHL)--a Mexican species not represented in most museums. Catocala euphemia, faustina(?) and violenta, Cave Cr. area, 9-11 Aug. (CDF). Lasiocampidae: Gloveria gargamelle and Dicogaster coronado, Cave Cr., 9-11 Aug. (CDF). Geometridae: Ixala klotsi and I. desperaria, Ash Cyn., Cochise Co., 8-9 Sept. (RHL). Phaeoura belua, Pero modestus and Snowia pulcherrima, Cave Cr. area, 9-11 Aug. (CDF). Oecophoridae: Apachea barberella (very large member of this family), Kitt Peak, 7000', Pima Co., 11 Sept. (RHL).

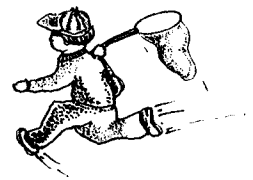
BUTTERFLIES: Urbanus dorantes in very small numbers and not seen until 26 Sept., LATE, Nogales area, Santa Cruz Co. (RB). Achalarus casica, Cogia hippalus, Helipetes ericetorum and Amblyscirtes eos, Cave Creek area, Chiricahua Mtns., Cochise Co., 9-11 Aug. (CDF). Piruna mexicana apparently absent from the Nogales area--none seen since the 1978 freeze (RB). Very few Phoebis agarithe--only 2 seen all season, Nogales area (RB). Anaea aidea, Madera Cyn., Pima Co. and Santa Cruz Co., 25, 28 April (KD).

NEVADA. Two new STATE and 7 new COUNTY records, with northerly and northwesterly range extensions. No migrations or moths reported from Nevada.

BUTTERFLIES: E. icelus, Bunker Hill area of Kingston Cyn., 7500-9000', LANDER COUNTY, 9 July with E. persius ssp. and H. comma harpalus (KH, E-SM). P. multicaudata, Kingston Cyn., 9 July and Deep Cr. Jct., 6200', Elko Co., 11 July (KH, E-SM). P. napi mcdunnoughi, Maggie Cr. - Maggie Summit, Elko Co., 11 July (KH, E-SM). P. occidentalis, E. ausonides and A. sara browningi, slopes and summit of Porter Peak, 8000-9265', Bull Run Mtns., Elko Co., 11 July (KH, E-SM). A. cethura (N. Mojave ssp.), 2 mi. NE. of Stagecoach, Lyon Co., 15 May (WS)--should be credited to D. Bauer as NEW COUNTY earlier [Lyon and 5 other counties already in the 1980 Harjes checklist--RLL]. E. mexicana, Wallace Cyn., N. end Monitor Range, EUREKA COUNTY and NORTH, 26 June and Stoneburger Cyn., E. side Toquima Range, NYE COUNTY and NORTHWEST 27th June (OS). Same data for N. iole, EUREKA COUNTY, 26 June and NYE COUNTY, 27 June (OS). Four species of coppers: editha, heteronea, helooides and nivalis, Bull Run Mtns., 5500-6600', Elko Co., 10 July (KH, E-SM). S. fuliginosum, Hwy. 225 at Adobe Summit, 6548', Elko Co., 10 July (KH, E-SM). M. spinetorum and M. siva, W. side of Desatoya Mtns., Churchill Co., 25 June (OS). L. marina, Bunker Hill area of Kingston Cyn., LANDER COUNTY, 9 July plus



1982 Season Summary



E. amyntula, E. battoides, G. piasus nevadae, L. melissa and P. icarioides ardea in same cyn. (KH, E-SM). P. lupini monticola assoc/w Eriogonum elatum in bud stage, spring 4 mi. E. of East Gate, W. side Desatoya Mtns., CHURCHILL COUNTY and STATE, 25 June (OS). P. lupini near monticola, Wahguyhe Peak, Grapevine Mtns., NYE COUNTY and STATE, 16 July (JE). [Both considered STATE records by RLL as same season and reported independently.] [P. lupini listed for 8 counties in the 1980 Harjes checklist, but no SUBSPECIES considered! More northerly or higher elevation records "may" refer to nominate lupini--RLL.] S. callippe harmonia and S. egleis (closest to linda), slopes and summit of Porter Peak, 8000-9625', Elko Co., 11 July (KH, E-SM). S. atlantis (marked like irene), Bull Run Mtns from 5500' to 9625', 10-11 July (KH, E-SM) with S. mormonia artonis between 6000-6300'. The checkerspot colon nevadensis was found from Jacks Cr. Cpgd. to Maggie Summit, 5500-6600', 10 July and Bull Run Basin to Columbia Basin, 6000-6300', Elko Co., 11 July (KH, E-SM). B. weidemeyerii latifascia, Kingston Cyn., 9 July and Bull Run Mtns., 5500-8000', Elko Co., 10-11 July (KH, E-SM). Eleven weidemeyerii X lorquini hybrids, Atalta Cr., 7000', Pine Forest Range, Humboldt Co., 31 July (KH, E-SM). C. ochracea brenda, Kingston Cyn. 7500-9000', 9 July (KH, E-SM).

CALIFORNIA. One new COUNTY record and a SOUTH range extension for a moth. For butterflies, 9 new COUNTY records with N, S and W range extensions. Well above normal precipitation on the coast, inland valleys and mountains. Some warmth between storms in the spring--hence coastwise the season somewhat late, but generally prolonged (RLL). With a very heavy snowpack, at high elevations the season was incredibly late (AS). On Castle Peak, 9000', a 14-foot snowbank still in mid-July ... down to 2 feet by onset of new snow in Sept.! (AS). Autumn was very wet--generally a disastrous year (AS). Autumn rains prolonged the season for many butterflies, but also initiated early emergence for some moths--generally a bonanza year (RLL). A few EARLY records, but many, many, were LATE.

MIGRATORY SPECIES: Nymphalis californica, none seen in Kern Co. or Tulare Co. during 1982 season (KD); an extremely poor year at Jerseydale, Mariposa Co. (OS); only 2 in San Bruno Mtns., San Mateo Co., 11 Oct.--but virtually absent from the Coast Ranges in non-migratory years, anyway (RLL). Vanessa cardui, occasional worn and fresh in Bay Area, 18 April to 4 Nov., but far short of migratory numbers (RLL). "Migration: cardui and N. californica very poor. Plexippus good." (AS). Danaus plexippus, many from mid-Aug. to mid-Sept., with some present early Nov., Jerseydale, 3500' (OS); less than usual numbers through Bay Area, Aug. to 9 Dec. (RLL).

MOTHS: Sphingidae: Proserpinus clarkiae, just E. of Branscomb, Mendocino Co., 29 May (DP). Saturniidae: Hyalophora euryalis, summit San Bruno Mtn., 1300', emerged off Ceanothus thyrsiflorus, 1 June, LATE (RLL) and a pair in copulo, Norden, 7000', Placer Co., 22 July--a month or more LATER than ever seen before (AS). Saturnia mendocino, Hunter Valley Mtn., Mariposa Co., 18 Apr. (OS) and Gates Cyn., Vaca Hills, Solano Co., 18 Apr. (RS). Coloradia pandora, several at entrance kiosk, Tioga Pass, 9945', HIGH, Tuolumne Co., 21 July (TK)--many miles from and above any Pinus jeffreyi; Middle Fork Cpgd., 4500', 3 mi. S. of Mather, Tuolumne Co., 11 Sept., LATE, among Pinus ponderosa (RMB,RLL). Hemileuca burnsi, Victorville, San Bernardino Co., 10 Oct. (J-JC,FS). H. eglanterina, San Bruno Mtns., San Mateo Co., 24 Oct. (RS) and numerous dates San Bruno Mtns. from 28 July to 27 Oct. (RLL). Arctiidae: Cisthene liberomaculata and C. dorsimaculata, Pala, 800', San Diego Co., 29 May (RHL). Arachnis picta, San Bruno Mtns., 11, 14, 20 Oct., COASTAL (RLL). Noctuidae: Lacinipolia francisca, San Bruno Mtns., 21 Sept.-Oct.-20 Nov. (RLL). Annaphila abdita, decia and lithosina, Kern River Cyn., Kern Co., 20 March (RHL). Characoma nilotica and Tathorhynchus exsiccata, Death Valley, Inyo Co., 26-27 Nov. (RHL). A far NORTH stray Erebus odorata, east Davis, Yolo Co., 24 July (AS). Liparidae: Orgyia magna, Pala, 800', San Diego Co., 29 May (RHL). Lasiocampidae: Tolype distincta, 3 mi. S. of Mather, 4500', Tuolumne Co., 11 Sept. (RMB,RLL). Malacosoma ambisimile, San Bruno Mtns., 25 June (RLL). Geometridae: Chlorosea banksaria, San Bruno Mtns., 15 June (RLL). Five species of Hydriomena including shasta borussata, Angelus Oaks, 6500', San Bernardino Co., 22 May (RHL). Epirrhoe plebeculata common, San Bruno Mtns., 9, 27, 29 Dec., EARLY for 83 season (RLL). Plataea californiaria, Aguanga, RIVERSIDE COUNTY, 28 March--used per the Rindge revision, thus a significant SOUTH range extension from the Monterey area (RHL) also, most abundant fall, winter, San Bruno Mtns., San Mateo Co., 21 Sept.-13 Dec. (RLL). Pyralidae: Pyrausta dapalis, San Bruno Mtns., 11 Oct., worn, LATE for 82, 9, 10, 29 Dec., fresh, common, EARLY for 83 season (RLL). Pogonomys proximalis, Carrizo Gorge Rd. S. of Hwy. 8, San Diego Co., 16 Apr. (RLL). Loxostege immerens, Ballona Creek, Los Angeles Co., 6 Mar. (RHL). Oecophoridae: Esperia sulphurella, Kensington, Contra Costa Co., 20 Mar. thru Apr. (RLL). Sesiidae: Zenodoxus sidalceae, San Bruno Mtns., 16 Aug. (RLL). Heliodinidae: Lithaliapteryx jubarella, Lovejoy Buttes, San Bernardino Co., 21 Mar. (RHL). Heliodines possibly extraneala, Palm Desert, Riverside Co., 28 Mar. (RHL).

BUTTERFLIES: E. icelus, E. side Jenkinson Res., 3500', El Dorado Co., 22 May (RK). E. brizo burgessi, Keystone Cyn., 5600', New York Mtns., San Bernardino Co., 18 Apr. (JE, CH, SM), E. persius, Alder Cr., 6700', Tulare Co., 5 Aug.--rare in south-central Calif. (KD). P. scriptura (vernal phenotype), Buttonwillow, Kern Co., 27 Feb., EARLY (KD). H. ericetorum, Clements, SAN JOAQUIN COUNTY, 12 Aug. (RK) and 1 ♂ downtown Sacramento, 13 June--rare (AS). P. libya lena, Grapevine Spns., Grapevine Mtns., Inyo Co., 7 May (JE). Long flight season for H. comma dodgei, San Bruno Mtns., 28 June-7 Oct. (RLL). H. columbia common, Hunter Valley Mtn., Mariposa Co., 18 Apr.-8 May and scarce 2nd. brood 21 Sept. (OS). H. lindseyi, 1 mi. SE. Glencoe, 2600-2800', Calaveras Co., 19 June (RK). E. ruricola (= vestris), 2 mi. E. Stewart's Point, Sonoma Co., 11 July (RLL,DP). A. vialis, Soda Cr., 2500', W. of Paxton, Plumas Co., 29 May (KH,E-SM). M. coloradensis martini, Keystone Cyn., 5600', San Bernardino Co., 18 Apr. (JE,CH,SM). P. clodius baldur still emerging at 8000', Castle Peak, Nevada Co., 8 Sept., LATE (AS) and at "usual" time, baldur common with P. phoebus sternitzkyi, Granite L., Swift Cr., Trinity Co., 19 July (RS). B. philenor hirsuta, Reservoir Hill, San Bruno Mtns., SAN MATEO COUNTY, adults 11 Apr.-14 July, mature larvae June, pupation early July, Aristolochia californica. [Isolated by 3 mi., a freeway and urbanization, from the classic population near Lake Merced, San Francisco--RLL]; strays in several odd places: West Sacramento, Yolo Co., 25 June; north Sacramento, 4 Sept. (1st. time in 11 years); and Suisun Marsh, Solano Co., 11 Sept. (all AS). P. rudkini, 5 mi. NE. Jacumba, 2800', San Diego Co., 16 April (RLL). P. indra fordii ova on Cymopterus, NW. end of Bristol Mtns, San Bernardino Co., 29 Mar. (JE). P. sisymbrii, 1.5 mi. S. Bluerock Spr., 3097' Tracy Hills, SAN JOAQUIN COUNTY, 23 Apr. (DM). Fresh sisymbrii and A. sara stella, Castle Peak, 9000' Nevada Co., 12 Aug., VERY LATE (AS). P. napi microstriata, Gates Cyn., Vaca Hills, Solano Co., 18 Apr. (RS) plus P. n. castoria (2nd brood), Gates Cyn., 16 May--2nd time in 11 years (AS) and P. n. castoria, The Geysers, Sonoma Co., 30 May (RLL). E. hyantis (Mt. Pinos block segregate), Saltos Mtn., Caliente Range, San Luis Obispo Co., 21 Apr. (WS). E. hyantis (andrewsi-lotta blend), adults and ova on Thelypodium stenopetalum, N. end of Baldwin Lake, San Bernardino Co., 16 May (JE). A. cethura morrisoni, 3 mi. N. Twin Oaks and 4 mi. N. Kernvale, 26 Feb., EARLY (WS); Tule Elk State Reserve, Kern Co., 27 Feb., EARLY due to watering of elk pasture, whereas in nearby "wild" habitats not in numbers until 20 Mar. after heavy rains (KD); Temblor Range from Crocker Summit, 3700' to 4.6 mi. N., 3200', San Luis Obispo Co., 23, 26 Apr., Thelypodium lasiophyllum (WS). A. cethura (N. Mojave ssp), Santa Rita Flats, 14 mi. NE. Independence, Inyo Co., 8, 16 May (WS). A. sara thoosa, Keystone Cyn., 5600', New York Mtns., San Bernardino Co., 18 Apr. (JE,CH,SM). F. lanceolata common, Soda Cr., 2500', W. of Paxton, Plumas Co., 29 May (KH,E-SM). C. philodice X eurytheme hybrids taken for 1st. time in Sierra Valley, Sierra Co., 13 Oct. (AS). C. eurytheme emerging in quantity, Rancho Cordova, Sacramento Co., 9

Dec., LATE despite heavy rains previous 2 weeks (AS). *Z. cesonia*, N. end Death Valley, E. of Last Chance Range, Inyo Co., 7 May (JE). *E. nicippe*, Lead Cyn., Inyo Mtns., 5 May (JE) and common near Cinco, 30 July, plus 1 "winter form", Jawbone Cyn., 9 Oct., both Kern Co. (KD). *N. iole*, Hemet, Riverside Co., 27 June (JE) and at 8000', HIGH, Castle Peak, Nevada Co., 25 Aug. (AS). *T. arota* common around Ribes, 6 mi. E. Manchester, Mendocino Co., 11 July (RLL,DP). The first *helleoides* for the Sacramento Valley (Davis, Yolo Co.), 18 June, two months LATE (AS) and very fresh, Mather, 4500' Tuolumne Co., 12 Sept., LATE (RMB,RLL). A few *mariposa*, Granite L., Swift Cr., Trinity Co., 19 July (RS). *Satyrium californica* larvae on *Ceanothus cuneatus*, Jenkinson Res., 3500', El Dorado Co., 22 May; adults emerged 9 June (RK). *Satyrium californica* swarming around live oak at dusk with *S. auretteorum*, near Tulloch Reservoir, Tuolumne Co., 22 May (RO) and *auretteorum*, Lang Crossing, 5000', Nevada Co., 3 Aug.; very LATE (AS). *S. auretteorum-spaxid* blends common, Alder Cr., 6700', Tulare Co., 5 Aug., LATE (KD). *S. tetra* and *M. nelsoni*, Forest Falls, San Bernardino Co., 16 Aug., LATE (RA). The "usual" time for *nelsoni*, plus *I. eryphon* and *I. iroides*, 29 May, Soda Cr., W. of Paxton, 2500', Plumas Co. (KH,E-SM). *I. augustus iroides*, 1 mi. N. Lockeford, SAN JOAQUIN COUNTY, 23-30 Apr. (RK). *I. f. fotis*, Keystone Cyn., 5600', New York Mtns., San Bernardino Co., 18 Apr. (JE,CH,SM). *C. lemberti* emerging fresh, Castle Peak, 9000' Nevada Co., 12 Aug., still flying (worn), 8 Sept., very LATE (AS). *L. marina*, Briceburg, 7 May and Jerseydale, 8 Aug., MARIPOSA COUNTY (OS). *H. ceraunus gyas*, Keystone Cyn., 5600', 18 Apr. (JE,CH,SM) and Kern R. at Hart Park, 4 mi. N. Bakersfield, 23 Sept.-1st. record for San Joaquin Valley (KD). A single ♂ *E. comyntas* assoc/with *Lotus purshianus*, lower NE. slope San Bruno Mtns., SAN MATEO COUNTY, 20 July (RLL). *P. sonorensis*, Waters End Rd., Lopez Lake, San Luis Obispo Co., 24 Apr. (RS). *E. enoptes tildenii* very common, 1 mi. W. of Hwy. 58 summit, Temblor Range, Kern Co. and San Luis Obispo Co., 27 Aug. (KD). *P. speciosa*, Lead Cyn., Inyo Mtns., Inyo Co., 5 May (JE). *G. lygdamus* race (not *palosverdensis* and not typical *australis*), Ballona Cr., Los Angeles Co., 6 Mar. (RHL). *G. lygdamus columbia* still emerging 25 Aug., LATE, Castle Peak, 9000', Nevada Co. (AS). *G. l. columbia*, *G. piasus* and *P. icarioides*, Soda Cr., 2500', W. of Paxton, Plumas Co., 29 May (KH,E-SM). *L. argyrognomon anna*, Gibson Mdw.s., and *P. lupini*, Granite L., Trinity Co., 19 July (RS). *P. lupini monticola* assoc/w *Eriogonum fasciculatum*, 20 mi. SE. Paicines, San Benito Co., 5 June (RK). *A. m. mormo* larvae on *Eriogonum umbellatum behiiforme*, N. slope North Peak, 3100', Mt. Diablo, Contra Costa Co., 31 May (GG,RK). *A. mormo tuolumnensis* (det. J. Emmel), hilltops near Butterbredt Peak, KERN COUNTY and SOUTH, 30 July (KD). *A. m. tuolumnensis* (also det. JE) common 1 mi. W. of Hwy. 58 summit, Temblor Range, KERN COUNTY and WEST side of San Joaquin Valley!, 27 Aug. (KD). [These populations assoc/w *Eriogonum wrightii*, but within the territories where *cythera* and *virgulti* have been recorded. Hence these are probably not REALLY new county or range extensions. Under this concept, previously collected *tuolumnensis* no doubt exist in museums and private collections from several more southerly, westerly, and lower elevation areas than the Type Locality--RLL.] *A. palmerii*, Afton along Mojave River., San Bernardino Co., 1 Sept. (JE). *S. cybele leto* and *S. hydaspe purpurascens*, N. of Weaverville opposite S. P. Tree Farm, Trinity Co., 17 July (RO) and worn ♂♂ *leto*, Mather, 4500' Tuolumne Co., 12 Sept., LATE (RMB). *S. callippe* near *liliana*, Rockville Park, Solano Co., 30 May (RS). *S. callippe inornata* rare at Jerseydale, but common at Bull Cr., 5 mi. NW. Briceburg, Mariposa Co., mid-June (OS). Chermock's Meadow Fritillary, just E. of Branscomb, Mendocino Co., 29 May (RLL,DP) and Granite L., Trinity Co., 19 July (RS). *P. mylitta* larvae on *Cirsium proteanum*, North Peak at 2800', Mt. Diablo, Contra Costa Co., 6 Mar. (RK). *C. lacinia* common in agricultural areas, adults around and larvae on *Helianthus*, Hemet, entire month of Sept. (JE). *T. leanira wrightii*, 5 mi. NE. Jacumba, 2800', San Diego Co., 16 Apr. (RLL). *T. leanira alma*, 2 mi. SE Ivanpah, San Bernardino Co., 18 Apr. (JE,CH,SM); Lead Cyn., Inyo Mtns., 5 May (JE); and Santa Rita Flats, 14 mi. NE. Independence, Inyo Co., 16 May (WS). Other checkerspots include: *gabbi* common, Gavilan Hills, 12 Apr., normal spring brood (RLL) and Hemet, 27 June, abnormal 2nd. brood (JE)--both Riverside Co., plus Upper Stevens Creek Park, SANTA CLARA COUNTY and NORTH, 24 July, LATE (DP); *chalcona* larvae on *Penstemon heterophyllus* (prediapause - 3 July 81), *Pedicularis densiflorus* (postdiapause - 6 Mar. 82), all North Peak of Mt. Diablo (RK); *E. chalcona olancha*, Chimney Creek Rd. on N. slope Lamont Peak (1 mi. N. of Kern Co. line), Tulare Co., SOUTH, 22 May, 25 June (KD). *P. faunus rusticus*, II, III instar larvae on *Rhododendron*, Soda Cr. W. of Paxton, Plumas Co., 29 May (KH,E-SM). *J. coenia* small winter phenotype, large emergence, Suisan Marsh, Solano Co., 6 Dec.-1st time observed in 11 years (AS) and small, some very reddish, San Bruno Mtns., 3 Nov.-27 Dec. (RLL). *D. gilippus strigosus*, Grapevine Sprs., Grapevine Mtns., Inyo Co., 7 May (JE).



ZONE 2 PACIFIC NORTHWEST: OREGON, WASHINGTON, BRITISH COLUMBIA. Coordinator: Jon H. Shepard (JHS). Contributors: Mark Burgess (MB), Sharon Collman (SC), Rod Crawford (RC), Charles R. Crowe (CC), P. C. Hammond (PH), Gerald J. Hilchie (GH), John Hinchliff (JH), Doug Knight (DK), Coleman Leuthy (CL), Etta J. Major (EM), Dave McCorkle (DM), Michael Moshier (MM), John Neyhart (JN), James P. Pearson (JPP), Phil Pearson (PP), Jonathan P. Pelman (JP), Joanne B. Peterson (JBP), Merrill A. Peterson (MP), Robert M. Pyle (RP), John Reichel (JR), Mark Smith (MS), F. Sperling (FS), G. B. Straley (GS). General Collecting Conditions: despite a relatively wet summer there was an increased amount of collecting.

MIGRATORY SPECIES: Many records of migratory species were reported. The outstanding one is a capture of *Erebus odora* at Revelstoke, B.C. Sept. 7 (JR). *D. plexippus* from the following localities: OREGON, Wallowa Co., Snake R., Dug Bar, el. 1085', July 17 (CL,MM), Cow Cr. Ranch, el. 1200', lat. 46°N, long. 116°W, July 17 (CL,MM), Lightning Cr., 1200'-1800', July 18 (CL,MM), Imnaha R. at mouth of Horse Cr., el. 1500', July 18 (CL,MM), Horse Creek, el. 3800', July 19 (CL,MM); WASHINGTON, Franklin Co., Lyons Ferry State Park, el. 550'-575'. Sept. 17 (JPP,PP), Pacific Co., Grays River Salmon Hatchery, T11N, R7W, Sec. 33, June 30-July 6 (RP), Walla Walla Co., Snake R. at Columbia R., el. 360'. Aug. 16 (MP). *V. cardui* from the following localities: WASHINGTON, Garfield Co., Hwy. 128, 2.3 mi. NE of Peola, el. 3850', Aug. 15 (JPP), Buckley Ridge, el. 6100', Aug. 15 (MP), N. slope Mount Misery, el. 6000', Aug. 16 (JPP); King Co., meadow below summit of East Tiger Mt., el. 2600', Aug. 20 (JPP); BRITISH COLUMBIA, Creston, Sept.-Oct. (DK). *V. anabella* from the following localities: WASHINGTON, Franklin Co., Lyons Ferry State Park, el. 550'-575', Sept. 17 (JPP,PP), King Co., saddle between West Tiger Peak and Tiger Peak, el. 2757', Aug. 20 (JPP), Kittitas Co., Hyak Cr., el. 3550', Sept. 18 (MP); BRITISH COLUMBIA, Creston, Aug. 26 (DK).

OREGON. BUTTERFLIES: Clatsop Co., Kyle Lake, May 30, June 12, Aug. 11 (CC) *C. tullia insulana* STATE Record; Crook Co., Marks Cr., 4 mi NE Ochoco Gd. Sta. May 23 (CC) *P. napi marginalis* COUNTY record; Curry Co., Hunter Cr., Rd. #3506, Aug. 2 (CC) *P. communis* COUNTY record; Deschutes Co., Indian Ford Campgd. (PH) *S. cybele leto* COUNTY record; Douglas Co., Roseburg (PH) *P. zelicaon* COUNTY record; Roseburg, April 4 (JH) *E. a. ausonides* COUNTY record; Nanyon Cr., Pass (DM) *A. lanceolata* COUNTY record; Twin Lakes (PH) *A. sara flora* COUNTY record; Jackson Co., Devil's Peak, Aug. 19 (MB) *C. p. ephyle* COUNTY record; Rustlers Peak, 12 mi SE of Prospect, Sept. 3 (MB) *V. virginensis* COUNTY record; Imnaha Camp, Seven Lakes Basin, July 26 (MB) *S. c. pugentensis* COUNTY record; Ashland, May 23 (MB) *B. philenor hirsuta* COUNTY record; Josephine Co., O'Brien, May 16 (GS) *A. lanceolata* COUNTY record; Bolan Lake (PH) *S. atlantis dodgei* COUNTY record; Klamath Co., Klamath Agency (N of Klamath Lake) (PH) *S. cybele leto* COUNTY record; Lane Co., nr. Brays Point, N. of Ten

Mile Cr. (PH) P. zelicaon COUNTY record; Grass Mt. (DM) S. callippe elaine COUNTY record; Linn Co., Quartzville Cr., S. Santiam R. (PH) H. grunus herri COUNTY record; Malheur Co., 10 mi WNW McDermitt, Trout Cr. Mts., June 9 (MS) P. battoides glaucon and G. piasus both COUNTY records; Morrow Co., ½ mi. W. Penland Lake, July 17 (CC) P. sonora COUNTY record; Polk Co., Rickreall Ridge, Mill Cr. Rd., May 8 (JH,DM) C. sheridanii COUNTY record; Tillamook Co., Cascade Head (PH) P. zelicaon COUNTY record. (Note that not all of the above Oregon records are 1982 captures, some are records brought to light since Dornfeld's book was published or records not reported in 1981.) W. L. Swisher reports Euchloe hyantis lotta, Alvord Desert area, Harney Co., 14 May - females alighting on one or the other of Streptanthella longirostris, Descurania pinnata and Thelypodium flexuosum.

WASHINGTON. BUTTERFLIES: Asotin Co., Clarkston, el. 800', Aug. 15 (MP, JPP) P. sabuleti COUNTY record; Hwy. 128, 14.5 mi. E. Peola, Aug. 15 (RP) H. juba COUNTY record; Chelan Co., Sand Cr., el. 1850'-1950', May 22-23 (JPP) larvae of A. milberti on Urtica dioica, June 27 P. eurymedon ovipositing on Holodiscus discolor; Little Eightmile Lake, el. 4404', Aug. 28 (PP) E. vidleri (southernmost Cascade record); Manastash Canyon, Sept. 25 (JPP,MP) larvae of P. eurymedon on Prunus emarginata var. emarginata, larvae of P. rutulus on Salix sp., larvae of P. multicaudatus on Prunus virginiana var. melanocarpa, larvae of L. lorquini on Salix sp.; Ferry Co., Scatter Cr. RD., Hwy. 21, S. of Republic, June 22 (CC) S. coronis simaetha COUNTY record; Franklin Co., Juniper Forest Dune area, el. 950'-1020', May 9 (JP) M. siva (common), E. hyantis, S. melinus, H. juba, P. zelicaon; Garfield Co., Hwy. 128, 2.3 mi. NE of Peola, el. 3850', Aug. 15 (RP) C. alexandra COUNTY record; N. slope of Mount Misery, el. 6000', Aug. 15 (MP, JPP) S. egleis COUNTY record; W. slope of Mount Misery, 1 mi. NE of Diamond Peak Lookout, Aug. 15 (RP) C. philodice COUNTY record; Grant Co., Corfu Rd., el. 800', Lat. 46.85°N, long. 119.28°W, July 11 (JP) S. sylvinus COUNTY record; Grays Harbor Co., Mount Colonel Bob. July 18 (SC) el. 3950' A. sara, P. zephyrus, el. 4300' I. mossii, G. lygdamus, E. vidleri, el. 4492' A. glandon, all of which are COUNTY records; 2 mi. E. of McCleary, Hwy. 8, T18N, R4W, Sec. 18, (RP) O. sylvanoides COUNTY record; King Co., Malakwa Lake Trail, el. 3800'-4999', Sept. 2 (JPP) larvae of P. zelicaon on Angelica sp.; Kittitas Co., Upper Rocky Coulee, el. 1800', May 2 (JP,MP) ova of P. sisymbrii on Arabis sparsiflora var. atrorubens; Schnebly Coulee, el. 1400'-1500', May 2 (JP,MP) larvae of C. sheridanii newcomeri on Eriogonum compositum var. lieanthum; Okanogan Co., Early Winters Campground, el. 2170', July 30 (JP,SC) larvae of P. eurymedon on Prunus emarginata var. emarginata; Pacific Co., Leadbetter Point, Willipa, Sept. 8 (RP) N. menapia COUNTY record; Pend Oreille Co., Hwy. 31 at Three-mile Cr., N. of Metaline Falls, June 16 (RP) A. vialis COUNTY record; Summit of Diamond Peak, T36N, R45E, Sec. 11, June 18 (RP) P. zelicaon COUNTY record; Pend Oreille R. at LeClerc Cr. Rd., T35N, R44E, Sec. 17, June 18 (RP) A. napi COUNTY record; Summit of Diamond Peak, June 18 (RP) I. augustus COUNTY record; Skamania Co., N. of Butte Camp area, Mount Saint Helens, el. 4550'-4750', Aug. 24 (RC) P. zelicaon, P. clodius, I. acmon, I. icarioides, L. argyrognomen, P. zephyrus; Stevens Co., Evergreen Cemetery, Colville, June 7 (RP) E. epipsodea COUNTY record; Douglas Falls, N. of Colville, T36N, R39E, Sec. 16, June 7 (RP) P. satyrus and C. palaemon both COUNTY records; marsh 1.5 mi. N. of Deep Lake, T39N, R41E, Sec. 14, June 7 (RP) C. selene COUNTY record; Thurston Co., Rocky Prairie, el. 250', May 16 (JP,MP, JPP,EM) collecting good at this classic site; Wahkiakum Co. Beaver Cr. Rd., at Elochomon R., T9N, R5W, Sec. 32, Aug. 22 (RP) C. pegala and P. oreas both COUNTY records; Walla Walla Co., Hwy. 125 N. of Walla Walla, el. 950', Aug. (JPP) P. mylitta COUNTY record; Snake R. at Columbia R., el. 360', Aug. 16 (MP, JPP) O. sylvanoides and C. tullia both COUNTY records.

BRITISH COLUMBIA. BUTTERFLIES: Peace River District, B.C.-Alta. border, Horn Ridge, Torrens R., July 12 (GH) C. epithore and A. sara both DISTRICT records, P. phoebus; N. bank of Peace R. at Taylor, June 21 (FS) O. garita and T. pylades both DISTRICT records, P. bairdii ovipositing on Artemisia dracunculus; 8 mi. W. Sunset Prairie, lat. 55°52'N, long. 120°59'W, July 2 (FS) P. mystic DISTRICT record, larvae of P. zelicaon on Zizia aptera; Pink Mt., alpine, July 7 (FS) L. phlaeas DISTRICT record, boreal, H. comma DISTRICT record; N. bank of Peace River at Taylor, July 8 (FS) A. rapae DISTRICT record; N. bank of Peace River at Clayhurst, Aug. 16 (FS) P. bairdii larvae on Artemisia dracunculus; Pink Mt., alpine, Aug. 17 (FS) larvae of P. machaon on Artemisia arctica; boreal, E. mariposa; Caribou District, Rd. from Macalister to Soda Creek (N. of Williams Lake), Aug. 18 (FS) larvae of P. bairdii on Artemisia dracunculus; Kootenay District, Kootenay Skyway Summit, W. of Creston, Aug. 20 (FS) larvae of P. zelicaon on Heracleum lanatum.
MOTHS: larvae of Leucoma salicis abundant on Lombardy Poplar at Creston (DK).



ZONE 3. ROCKY MOUNTAINS: ALBERTA, IDAHO, MONTANA, WYOMING, UTAH, COLORADO and NEW MEXICO. Coordinator: Ray E. Stanford. Contributors: Karolis Bagdonas and his "Flying Circus" (BFC; including Dave Arhenholtz, William Bagdonas, Terry Clifford, Bob Davis, Chuck Farber, Mary Harter, Jim Pearson, Merrill Peterson, Katie Wilkinson), George J. Balogh (GJB), John J. Bowe (JJB), James J. Coleman (JJC), Laurence Crabtree (LC), Steven J. Cary (SJC), David L. Eiler (DLE), Clifford D. Ferris (CDF), Gregory S. Forbes (GSF), James P. Fitter (JPF), Michael S. Fisher (MSF), Clyde F. Gillette (CFG), Joel M. Johnson (JMJ), Samuel A. Johnson (SAJ), Norbert G. Kondla (NGK), Steven J. Kohler (SJK), Richard L. Klopshinske (RLK), David D. Lawrie (DDL), Ronald H. Leuschner (RHL), Joanna McCaffrey (JM), Sterling O. Mattoon (SOM), Austin P. Platt (APP), Robert M. Pyle (RMP), Ted M. Pike (RMP), Richard C. Rosché (RCR), Charles P. Slater (CPS), James A. Scott (JAS), Jon H. Shepard (JHS), Patrick J. Savage (PJS), Ray E. Stanford (RES), Michael E. Toliver (MET), Ernest H. Williams (EHW), William D. Winter, Jr. (WDW). This list of 33 contributors compares with 44 for Zone 3 in 1980, and 35 in 1981. Collectors other than the contributors themselves are acknowledged under the respective states and province.

Again for 1982 the emphasis is on new distributional information. A few older records are included if of great interest, but the vast majority of data, without year indicated, are from 1982. As before, I have tried to verify unusual records, but the final responsibility for accuracy lies with the contributors. The order of genera is that of Miller/Brown 1981, but as previously I have indicated both conservative and split generic and specific names where controversy exists. Capital letters denote putative STATE, COUNTY, EARLY, LATE, or directional range extensions (HIGH, N, S, E, W, etc.). Zone 3 totals for 1982 include 7 butterfly STATE and 718 butterfly COUNTY records, and some for moths.

ALBERTA. Contributors: NGK (including T, S. and C. Kondla), DDL (including Mary E. Lawrie, MEL), TMP. Late May snowfall retarded the season, but flights of most species were otherwise normal.

MOTHS: Brephos infans, Calgary, 1 May. Pyrausta funebris, Bragg Creek, 12 June. Euchoera albiovittata, base of Mt. Allen, 17 July. Catocala ?relicta, Calgary, 7 Sept. All DDL.

BUTTERFLIES: There are 6 new map dots for southern Alberta, 3 provincial records and another confirmatory one. E. clarus, oviposition observed on wild licorice at Taber (TMP). A. vialis, Peace River Valley, 23 June (TMP). P. eurymedon, Calgary, apparently new from SC Alberta (MEL). C. nastes, Willmore Wilderness Park (WWP), 12-13 July (TMP). L. cupreus, WWP, 11 July (TMP). I. mossii schryverii, Windsor Mtn., SW Alberta, PROVINCIAL RECORD, 24 May and 12 June (NGK). A. glandon (franklinii), WWP, 12-13 July (TMP). S. aphrodite, Bragg Creek, 21 July (DDL). B. napaea, WWP,

12-13 July (TMP). B. (C.) improba, WWP, 12-13 July (TMP). C. damoetas, White Horse Cr., Cadinan Mtn, 26 July (TMP). P. ?progne, Bragg Cr, 21 July (DDL) (NB: if correct, this confirms progne from SW Alberta). P. oreas, Windsor Mtn., SW Alberta, confirmatory PROVINCIAL record, 24 May (NGK). B. lorquini, Windsor Mtn., SW Alberta, 11 July (NGK). C. tullia mackenziei, PROVINCIAL record, 23 June 1981, T. Thorin and L. Bogaert, fide NGK. E. magdalena, WWP, 12-13 July (TMP), confirms PROVINCIAL record by G. Hilchie in 1981. E. disa, Bragg Creek, new from SW Alberta, 22 May (DDL). O. taygete, WWP, 12-13 July (TMP). O. melissa beani, WWP, 12-13 July (TMP). O. jutta, Bragg Creek, 12 June (DDL). O. chryxus, Mt. Allen summit, 1 July (DDL). O. macounii, Mt. Allen summit, 1 and 17 July (DDL). Reared from Peace River Valley in 1982: P. bairdii, E. epipsodea, E. discoidalis, O. uhleri and O. alberta (TMP). O. alberta ova took 30 days to hatch.

IDAHO. Contributors: DLE, SOM (including Eileen Mattoon and Ken Hansen), RMP (including Jim Pearson and Merrill Peterson), JHS (including S. Shepard). No contributor commented on the seasonal conditions.

MOTHS: No data were received.

BUTTERFLIES: There are 25 county records, but no state records or major range extensions. E. persius, Soldier Mts., CAMAS CO., 13 July (SOM); nr. Gilmore, Lemhi Range, LEMHI CO., 14 July (SOM). O. sylvanoides, Swinging Bridge Cpgd., VALLEY CO., 14 Aug (RMP). P. rutulus, nr Meadows, ADAMS CO., 14 Aug (RMP). P. multicaudatus, same data (RMP). N. menapia, Swinging Bridge Cpgd., Valley Co., 14 Aug, population explosion with thousands of individuals flying and covering everything (RMP). P. sisymbrii, Soldier Mts., CAMAS CO., 13 July (SOM). A. sara nr browningi, same data (SOM). L. (C.) heteronea, nr Georgetown, Bear Lake Co., 15 July (JHS). L. (E.) nivalis, Soldier Mts., CAMAS CO., 13 July (SOM). Callophrys sp to be determined, same data (SOM). E. battoides, same data (SOM). G. lygdamus, same data (SOM). G. piasus, same data (SOM). L. melissa, nr Meadows, ADAMS CO., 14 Aug (RMP); Kinney Pt 7100', ADAMS CO., 26 July 1979 (DLE; det CDF; delete record for L. argyrognomon from this county). P. icariodes, Soldier Mts., CAMAS CO., 13 July (SOM). P. acmon, same data (SOM). S. cybele, Swinging Bridge Cpgd., VALLEY CO., 14 Aug (RMP). S. coronis, nr Meadows, ADAMS CO., 14 Aug (RMP). S. atlantis viola, Soldier Mts., CAMAS CO., 13 July (SOM). C. palla, same data (SOM). P. zephyrus, same data (SOM). P. faunus, nr Meadows, Adams Co., 14 Aug (RMP). V. atalanta, Strike Wildlife Management Area, OWYHEE CO., 8 July (DLE). B. lorquini burrisonii, Soldier Mts., CAMAS CO., 13 July (SOM). C. pegala ariane/boopis, various localities, Owyhee Co., 8 July (DLE). C. sthenele, N of Riggins, IDAHO CO., 14 Aug (RMP). E. epipsodea, Soldier Mts., CAMAS CO., 13 July (SOM). O. chryxus, same data (SOM).

MONTANA. Contributors: NGK (including T., S., C. Kondla and S. Harris), SJK [including records of W. L. Wheaton, (WLW)], SOM (including Eileen Mattoon and Ken Hansen), JHS (including S. Shepard), EHW. NGK found in north-central MT a cool spring, with snow in late May, resulting in a good flight of spring and summer species together in June and July. There are 182 COUNTY records for butterflies, with many range extensions, but no STATE records. All SJK records from Pondera County are from Pike Cr. Rd., S. of Marias Pass, 4 Aug 1982.

MOTHS: No data were received.

BUTTERFLIES: E. clarus, Zortman, Little Rocky Mts., PHILLIPS CO., 4 July 1949 (WLW); same locality, late June 1982 (NGK); Bass Cr., near Florence, RAVALLI CO. 13 June (SJK). T. pylades, Zortman, PHILLIPS CO., late June (NGK). E. icelus, Zortman, PHILLIPS CO., late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). E. persius, Zortman, PHILLIPS CO., late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK); W. Slope, Crazy Mts., 6700', PARK CO., 28 July (SOM). E. afranius, East Butte, Sweetgrass Hills, LIBERTY CO., 16 May and 19 June (NGK); West Butte, Sweetgrass Hills, TOOLE CO., 13 June (NGK); Zortman, PHILLIPS CO., late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). (N.B. These two species seem to be sympatric and synchronic in much of Idaho and Montana, males often having intermediate genitalia fide CDF; careful biologic work is very much needed, as indicated by Burns in 1964). P. centaureae, Beartooth Plateau, Carbon Co., 22 July (JHS). P. ruralis, Little Belt Mts., JUDITH BASIN CO., 26 July (SOM). P. ?scriptura, to be verified, Kings Hill 8008', MEAGHER CO., 23 July (JHS). P. communis, N. of James Kipp Rec. Area, PHILLIPS CO., 24 June (NGK); West Butte, Sweetgrass Hills, TOOLE CO., 25 July (SOM); 3 mi N.E. of Billings, YELLOWSTONE CO., 30 May 1966 (WLW). P. catullus, N. of James Kipp Rec. Area, PHILLIPS CO. and NE, 24 June (NGK). O. garita, Zortman, PHILLIPS CO. and NE, late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK); Ringling, MEAGHER CO., 23 July (JHS, confirms Martinsdale record 19 June 1900, C. J. Paine, MCZ collection); Shields R. Rd., 6000', PARK CO., 27 July (SOM). H. pahaska, Beaver Creek Park, Bear Paw Mts., HILL CO. and NORTH for Zone 3, late June (NGK). H. juba, 9200' CARBON CO., 19 July (EHW). H. nevada, 12 mi N of White Sulphur Spgs., MEAGHER CO., 8 July (NGK); Zortman, PHILLIPS CO., and NE, late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., and N for Zone 3, late June (NGK). P. mystic, 12 mi N of White Sulphur Spgs, MEAGHER CO., 8 July (NGK); Zortman, PHILLIPS CO. and NE, 6 Aug (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., 6 Aug (NGK) (N.B.: could these last two records be O. sylvanoides? The dates are very late for mystic. RES). P. draco, Shields River Road, PARK CO., 23 July (SOM); nr MacDonald Pass, LEWIS & CLARK CO., 8 July (SJK). A. vialis, Zortman, PHILLIPS CO. and NE, late June (NGK). P. clodius, PONDERA CO. and NE (SJK). P. phoebus, Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK); PONDERA CO. (SJK). P. zelicaon (yellow form except as noted): West Butte, Sweetgrass Hills, TOOLE CO., 12 June, black "nitra" form only (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK); Porphyry Peak Lookout, 8232', JUDITH BASIN CO., 26 July, yellow and black forms (SOM); PONDERA CO., 4 Aug LATE (SJK); Saco, PHILLIPS CO., 1948 (WLW). P. glaucus, Maiden Cn, Judith Mts., FERGUS CO., late June (NGK); Zortman, PHILLIPS CO., late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK); P. rutulus, Maiden Cn, Judith Mts., FERGUS CO. and NE, 25 June (NGK). P. eurymedon, N Moccasin Mts. nr Kendall, FERGUS CO., and NE, 25 June (NGK). P. multicaudatus, Maiden Cn, Judith Mts., FERGUS CO., 25 June (NGK); Zortman, PHILLIPS CO., late June (NGK); also Saco, 13 June 1951, (WLW); Beaver Creek Park, Bear Paw Pts., HILL CO., late June (NGK). P. rapae, Zortman, PHILLIPS CO., late June (NGK). P. napi, PONDERA CO. (SJK). P. protodice, Mid Butte, Sweetgrass Hills, TOOLE CO., 25 July (SOM). A. sara, Porphyry Peak, JUDITH BASIN CO., 26 July (SOM); PONDERA CO., 4 Aug LATE (SJK). E. ausonides, Zortman, PHILLIPS CO., and NE, late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK); Porphyry Peak, JUDITH BASIN CO., 26 July (SOM); PONDERA CO., 4 Aug LATE (SJK). E. olympia, Saco, PHILLIPS CO., May 1948 (WLW); N of James Kipp Rec Area, PHILLIPS CO., 24 June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). C. eurytheme, CARBON CO., July (SJK); PHILLIPS CO., Aug (WLW). C. philodice, LIBERTY CO., June (NGK); PHILLIPS CO., June (NGK); HILL CO., June (NGK) (N.B.: the only species now recorded from more than 90% of MT counties). C. alexandra, East Butte, Sweetgrass Hills, LIBERTY CO., May-June (NGK). C. gigantea harroweri, Shields River Rd, 6000', PARK CO., 23 July (SOM); Seeley Lake, MISSOULA CO and NORTH, 2 & 21 July (SJK). L. phlaeas, Beartooth Plateau, Carbon Co., 22 July (JHS). L. cupreus, same data (JHS); Porphyry Peak, JUDITH BASIN/MEAGHER CO. line, 26 July (SOM). L. (G.) editha, Shields River Rd, PARK CO., 28 July (SOM); Saco, PHILLIPS CO., Sep 1948 (WLW) (N.B.: verification needed; this may well be xanthoides dione). L. (G.) xanthoides dione, West Butte, Sweetgrass Hills, TOOLE CO., 25 July (SOM); see editha above. L. (C.) rubidus, Nelson Resvr, PHILLIPS CO., 30 May 1951 (WLW). L. (C.) heteronea, PONDERA CO. (SJK). L. (E.) helloides, Saco, PHILLIPS CO., Sept 1948 (WLW). L. (E.) dorcas florus, Beaver Creek Park, Bear Paw Mts., HILL CO., 6 Aug (NGK). L. (E.) nivalis, PONDERA CO. and NE (SJK). L. (E.) mariposa, PONDERA

CO. (SJK). H. titus, nr Hays, BLAINE CO., June/Aug (NGK). S. sylvinus, Skalkaho Pass, GRANITE CO., 14 Aug (SJK). C. sheridanii, 7 mi NW of Babb, GLACIER CO., 20 May (SJK). C. affinis, Beaver Creek Park, Bear Paw Mts., HILL CO. and NORTH, late June (NGK). M. siva, N of Kipp Rec Area, PHILLIPS CO. and NE, 24 June (NGK). I. polios, Zortman, PHILLIPS CO. and NE, late June (NGK). S. melinus, Beaver Creek Park, Bear Paw Mts., HILL CO. and NORTH, late June (NGK). E. amyntula, Zortman, PHILLIPS CO., late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK); Little Belt Mts., JUDITH BASIN CO., 26 July (SOM). C. argiolus ladon, Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). E. enoptes, nr Lemhi Pass, BEAVERHEAD CO., 20 July (SJK). G. lygdamus, East Butte, Sweetgrass Hills, LIBERTY CO., May-June (NGK); Zortman, PHILLIPS CO., late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK); Kings Hill, 8008', MEAGHER CO., 23 July (JHS). G. pius, Beaver Creek Park, Bear Paw Mts., HILL CO. and NE, late June (NGK). L. melissa, Saco, PHILLIPS CO., 16 June 1958 (WLW); same county, late June 1982 (NGK); PONDERA CO. (SJK); Beaver Creek Park, Bear Paw Mts., HILL CO., 6-7 Aug (NGK). P. saepiolus, East Butte, Sweetgrass Hills, LIBERTY CO., May-June (NGK); nr Hays, BLAINE CO., 23 June (NGK); Zortman, PHILLIPS CO., late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). P. icarioides, East Butte, Sweetgrass Hills, LIBERTY CO., May-June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). P. acmon, nr Kendall, FERGUS CO., 25-26 June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO. and N, late June (NGK); nr Lemhi Pass, BEAVERHEAD CO., 20 July (SJK); Neihart, CASCADE CO., July 1947 (WLW); Saco, PHILLIPS CO. and NE, 11 Aug 1951 (WLW). P. shasta, Beaver Creek Park, Bear Paw Mts., HILL CO. and N, late June (NGK). A. glandon (franklinii), Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK); St. Marys Peak, RAVALLI CO., 15 Aug (SJK); Saco, PHILLIPS CO. 1949 (WLW). E. claudia, Saco PHILLIPS CO. 1948 (WLW). S. aphrodite, Saco, PHILLIPS CO. 1948 (WLW); Zortman, same county, 6 Aug 1982 (NGK). S. edwardsii, Zortman, PHILLIPS CO., 6 Aug (NGK). S. zerene, PONDERA CO. (SJK). S. callippe, Porphyry Peak, Little Belt Mts., JUDITH BASIN CO., 27 July (SOM); Nelson Resrv, PHILLIPS CO., 30 June 1951 (WLW). S. egleis, Beaver Creek Park, Bear Paw Mts., HILL CO. and NE, late June (NGK); Porphyry Peak, Little Belt Mts., JUDITH BASIN CO., 26 July (SOM). S. atlantis, Zortman, PHILLIPS CO., 6 Aug (NGK); PONDERA CO. (SJK). S. hydaspe, PONDERA CO. (SJK). S. mormonia, PONDERA CO. (SJK). B. (C.) selene, 12 mi N of White Sulphur Sps, MEAGHER CO., 8 July (NGK); Zortman, PHILLIPS CO. and NE, 4 July 1948 (WLW). B. (C.) bellona, nr Hays, BLAINE CO. and NE, 6 Aug (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). B. (C.) kriemhild, Shields River Rd, Crazy Mts., PARK CO., 28 July (SOM). B. (C.) epithore, PONDERA CO. (SJK). E. (H.) gilletti, PONDERA CO. (SJK). E. (O.) anicia, East Butte, Sweetgrass Hills, LIBERTY CO., 16 May/19 June (NGK); PONDERA CO., (SJK). E. (O.) editha, East Butte, Sweetgrass Hills, LIBERTY CO., 16 May/19 June (NGK); Maiden Cn, Judith Mts., FERGUS CO., 25-26 June (NGK); Zortman, PHILLIPS CO. and NE, late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). C. palla, Beaver Creek Park, Bear Paw Mts., HILL CO. and NE, late June (NGK); PONDERA CO., 4 Aug LATE (SJK). C. acastus, 5 mi S of Billings, YELLOWSTONE CO., 30 May 1966 (WLW). P. tharos, "A" phenotype, N of Kipp Rec Area, PHILLIPS CO., 24 June (NGK); morpheus phenotype, Zortman, late June (NGK); "A" phenotype, Beaver Creek Park, Bear Paw Mts., HILL CO. and NORTH, late June (NGK); phenotype not stated, Shields River Rd, 6000', PARK CO. (SOM). P. batesii, Zortman, PHILLIPS CO. and possible STATE RECORD (there are 2 questionable earlier records), late June and early July (NGK). P. pratensis (campestris), Beaver Creek Park, Bear Paw Mts., HILL CO. and NE, late June (NGK); PONDERA CO. (SJK). P. pallida, 12 mi N of White Sulphur Sps, MEAGHER CO., 8 July (NGK); N Moccasin Mts nr Kendall, FERGUS CO. (NGK); Zortman, PHILLIPS CO. and NE, late June and early July (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK); Pattee Cn, MISSOULA CO., NW for MT and a surprise, 14 June (SJK). P. oreas, Cyr, MINERAL CO., 11 May (SJK). N. (A.) milberti, LIBERTY CO., May-June (NGK). N. antiopa, LIBERTY (NGK) and PHILLIPS (WLW,NGK) counties. V. cardui, Hobson, JUDITH BASIN CO., 1949 (WLW). B. archippus, N of Kipp Rec Area, PHILLIPS CO., 24 June (NGK); Hinsdale, VALLEY CO. and NE, 1948 (WLW). B. arthemis, PONDERA CO. and SOUTH (SJK). B. weidemeyerii, Zortman, PHILLIPS CO. and NE, late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). B. lorquini, PONDERA CO. (SJK). C. tullia, Kings Hill, 8008', MEAGHER CO., 23 July (JHS). C. benjamini, 7 mi E of Geyser, JUDITH BASIN CO. (SJK); Saco, PHILLIPS CO., 16 June (WLW). C. pegala boopis, Ringling, MEAGHER CO. 23 July (JHS). C. oetus, PONDERA CO. (SJK). E. episoidea, East Butte, Sweetgrass Hills, LIBERTY CO., 19 June (NGK); nr Hays, BLAINE CO., 23 June (NGK); Zortman, PHILLIPS CO. and NE, late June (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). E. magdalena, Beartooth Plateau, 9500', Carbon Co., 22 July (JHS). E. theano, same data (JHS). E. callias, same data (JHS). O. chryxus, PONDERA CO. (SJK). O. uhleri, East Butte, Sweetgrass Hills, LIBERTY CO., 16 May/19 June (NGK); Zortman, PHILLIPS CO., June 1948 (WLW); same locality, late June 1982 (NGK); Beaver Creek Park, Bear Paw Mts., HILL CO., late June (NGK). O. alberta, East Butte, Sweetgrass Hills, LIBERTY CO., 16 May/19 June (NGK); Zortman, PHILLIPS CO. and NE, June 1948 (WLW). O. taygete, Beartooth Plateau, 9500', CARBON CO., 22 July (JHS). N. ridingsii, Saco, PHILLIPS CO. and NE, 16 June (WLW). D. plexippus, nr Florence, RAVALLI CO., 24 Aug (SJK).

WYOMING: Contributors: BFC, CDF, JMJ, RHL, SOM (including Eileen Mattoon and Ken Hansen), APP, RCR (including Mark E. Rosché and Dorothy J. Rosché), PJS, JHS (including S. Shepard), EHW. It was the worst collecting season since at least 1968 (CDF), with cold temperatures and abundant spring and summer rains, but the annual meeting of the Lep Soc in Laramie in July attracted collectors from around the nation, who found many new and interesting records anyway. There are 47 butterfly county records, but no state records or major range extensions. Many of the moth data may be new.

MOTHS: Battle Creek Cpgd, Carbon Co, 19-20 July (CDF): Apantesis williamsi, Autographa mappa, Cerura borealis, Chrysaspidia putnami, Cabera variolaria, C erythemaria, Caripeta ?hilumaria, Diacrisia vagans, Dysstroma sp, Estigmene congrua, Euclidea cuspeida (3-4 July), Eulithis propulsata, Euchlaena tigtinaria, Hemaris senta (3-4 July), Holomelina sp, Iridopsis larvaria, Lacinipolia renigera, Leucania sp, Loxostege cerealis, Melanchnra adjuncta, Nadata gibbosa, Neoterpes trianguliferata, Ochropleura plecta, Pachysphinx modesta, Parasemia plantaginis, Polychrysis morigera, Prochoerodes forficaria combinata, Pseudomothus ferrisi, Protitame ?matilda, Plataea trilinearia, Pero occidentalis packardi, Smerinthus cerisyi, Schizura sp, Syneda adambata (3-4 July), Scopula junctaria quinquelinea, Semiothisa pervolata, S. hebetata, S. neptaria, Xanthorhoe m. munitata, Xanthotype sospeta. The remaining moth records are all from RHL: Laramie, 15-16 July, noctuids especially Euxoa. Happy Jack, 15 mi E Laramie, 16-18 July; noctuids and Ethmia monticola. Sand Creek above Centennial, Albany Co., 17 July: many Laspeyresinae on forest floor. Big Horn Mts., 19 July, many Pterophoridae by net at dusk. Buffalo, Johnson Co., 19 July: many moths incl. Nola cilicoides euryppensis. Cody, Park Co., 20 July: Dasypoudaea meadi. Buffalo Fork nr Moran, Teton Co., 21 July: Sphinx vashti, Ichthyura brucei, Acronictinae 4 sp, Polia 6 sp, Anaplectoides pressus fales, Eupithecia nabokovi, Acossus centerensis. Jackson, Teton Co., 22 July: Hypereschra stragula manitow, Polia nevadae canadensis. Additional species, Battle Cr Cpgd, 19-20 July (BFC--see also CDF records above): Hyles lineata, Paonias myops, Sphinx vashti, Ceratonia undulosa CARBON CO. record, Euchaetias oregonensis.

BUTTERFLIES: E. clarus, 9 mi S of Lander, FREMONT CO. and WEST, 20 July (JHS). E. brizo burgessii and E. telemachus, Battle Cr, Carbon Co., 4 July LATE (CDF). E. afranius, nr Newcastle, WESTON CO., 5 June (RCR). P. centaureae, Bald Mtn., 9100', SHERIDAN CO., 7 July 1972 (RCR). P. communis, nr Newcastle, WESTON CO., 6 Aug (RCR). O. garita, Deer Creek Range, NATRONA CO., 19 July (SOM). H. nevada, Jct Hwy 120/296, PARK CO., 29 July (JHS). H.

leonardus pawnee, nr Newcastle, WESTON CO., 4 Sep (RCR). A. campestris, Deer Creek Range, NATRONA CO., 19 July (SOM). P. draco, same data (SOM). P. phoebus, Haystack Mts., NATRONA CO., 19 July (SOM). P. indra, 9 mi S of Lander, FREMONT CO., 20 July (JHS). P. rutulus, 10 mi S of Lander, FREMONT CO., 20 July (JHS); Shirley Basin, NATRONA CO., 19 July (SOM). P. protodice, 8600', PARK CO., 22 July (EHW). C. eurytheme, nr Newcastle, WESTON CO., 6 Aug (RCR). C. alexandra, Deer Cr Rg, NATRONA CO., 19 July (SOM). C. scudderii, good flight in Snowy Rg 9200', late July (CDF). C. gigantea harroweri, Canyon Cr Mdws., Hwy 131, Fremont Co., 19 July (JHS). L. cupreus, Sawmill Cr, 9000', S of Lander, Fremont Co., 19 July (JHS). L. (G.) xanthoides dione, nr Newcastle, WESTON CO., 30 June 1972 (RCR). L. (G.) editha montana, Sawmill Cr 9000', S of Lander, Fremont Co., 19 July (JHS). L. (C.) rubidus, Haystack Mts., Natrona Co., 19 July (SOM); WASHAKIE CO., 13 July (CDF). L. (E.) nivalis, Deer Cr Rg, NATRONA CO., 19 July (SOM). S. liparops, Haystack Mts., NATRONA CO., 19 July (SOM). S. acadica, same data (SOM). C. sheridanii and C. affinis, Sierra Madre Rg, 2 July LATE (CDF). M. siva, Haystack Mts., NATRONA CO., 19 July (SOM). M. spinetorum, Wind R Mts., SUBLETTE CO., 7 July (JMJ). I. eryphon, same data (JMJ). S. melinus, nr Newcastle, WESTON CO., 4 Sept (RCR); Haystack Mts., NATRONA CO., 19 July (SOM). H. isola, Battle Cr Cpgd., CARBON CO., 19 July (CDF). P. icarioides, Deer Cr Rg, NATRONA CO., 19 July (SOM). B. (C.) frigga sagata, Sand Lk Rd, Snowy Rg, 22 July LATE (CDF). S. cybele charlottii, Battle Cr Cpgd, Carbon Co., 19 July (CDF). S. edwardsii, Deer Cr Rg, NATRONA CO., 19 July (SOM). S. egleis nr macdunnoughi, Haystack Mts, NATRONA CO., 19 July (SOM). S. zerene platina, Battle Cr Cpgd, Carbon Co., 19 July (CDF). S. callippe nr meadii, Shirley Basin, NATRONA CO., 19 July (SOM). S. coronis nr halcyone, same data (SOM). E. (O.) editha, tentative det, nr Burgess Jct, Big Horn Mts., 8000', SHERIDAN CO., 22 July (SOM). C. nycteis drusius, Battle Cr Cpgd, Sierra Madre Rg, CARBON CO., 19 July (CDF). C. palla flavula, same data (CDF). C. acastus, Saddlestring, JOHNSON CO., 1 Aug 1976 (APP). P. tharos, probably "A" phenotype, nr Newcastle, WESTON CO., 5 June (RCR); P. t. pascoensis ("B" phenotype) and P. batesii, Black Hills NF, Crook Co., 23 July (CDF). E. claudia, 5 mi downriver from Green Rv Lakes, SUBLETTE CO., 10 July (S. F. Ferguson, reported by PJS). P. satyrus, Haystack Mts., NATRONA CO., 19 July (SOM). V. atalanta and V. cardui, Sawmill Cr 9000', S of Lander, FREMONT CO., 19 July (JHS). C. haydenii, Dead Indian Hill, 8600', Park Co., 20 July (JHS). C. oetus, Shirley Basin, 5600', NATRONA CO., 19 July (SOM). O. uhleri, Jct Hwy 120/296, Park Co., 20 July (JHS). O. melissa, and O. taygete, West Summit, Beartooth Pass 11000', Park Co., 21 July (JHS). D. plexippus, nr Newcastle, 6 Aug and 4 Sept, WESTON CO. (RCR); Shirley Basin, NATRONA CO., 19 July (SOM).

ADDENDA: 64 species were tallied by BFC in Albany Co. on 10 Aug on an official Xerces Society count, but there were no county records.

UTAH. Contributors: BFC, CDF, CFG, JMJ, RHL, PJS (including Susan F. Ferguson, SFF), RES (including Peter L. Eades, PLE, and David J. Ferguson, DJF). Heavy snowpack retarded spring species somewhat, and June and July were generally cool, cloudy, wet and windy. However, CDF found conditions drier than usual in August. CFG's intensive study of UT Butterfly distribution (excluding skippers) continued despite generally poor weather, and he obtained, from all sources, 277 new county records. These, when combined with others' data, totalled 353 county records (including skippers) for butterflies; there were at least 4 state records for moths and innumerable county records. Capitalized COUNTY records followed by * indicate that CFG has earlier records which are not yet available to this coordinator. STATE RECORD: Eyrnnis horatius (q.v.).

MOTHS: St. George, Washington Co., 12 July, RHL; Martia arizonella, Noctuella palmalis (very red-orange), Semio. minuta, Yrias metaleuca. Provo, Utah Co., 23 July, RHL; Archanaera subflava, Dasychira vagans grisea. Bryce Cn (just N), 24 July, RHL: many species incl. Carpoides incopriaria. Cedar Breaks, Iron Co., 10,333', 25 July, RHL: several micros including 3 probably STATE records: Pyla aeneoviridella, P. metallicella, Catastia incorruscella; also Schinia villosa, ? new ssp. Crouse Cn, 6200', Daggett Co., 2 Aug, CDF: Alcis balteria, Acronicta sp, Apantesis sp, Arachnis picta, Catocala ? stretchi, C. ? faustina, Choristoneura conflictana, Gnophaela vermiculata, Lycomorpha grotei, Pachysphinx occidentalis, Polia nimbosa, Paonias myops, Papaipema ?marginidens, Pero giganteus, Turuptiona permaculata, many undet sp. Pack Creek Cpgd, San Juan Co., 6200'-6500', 3 Aug., CDF: Anacamptodes sp, Apantesis generua, Cerura ?occidentalis, Dasychira vagans grisea, Evergestis simulatilis, Hemihyalea ?labecula, Nemeris speciosa, Pero giganteus, P. modestus, Pyrausta subequalis plagalus, Semiothisa ?curvata, S. ?nubiculata. Crouse Cn, Daggett Co., 14 Aug, BFC: Apantesis parthenice, A. phyllira, A. williamsi, Arachnis picta, Diacrisia vagans, Halisdota maculata, Lycomorpha grotei, Paonias myops, Sphinx vashti, Turuptiona permaculata, etc.

BUTTERFLIES: Eyrnnis horatius, N of Hwy 46, 0.5 mi W of Co line, 6010', SAN JUAN CO and STATE record, 30 Apr (RES). E. afranius, Pack Cr Cpgd, 6200', San Juan Co., 3 Aug (CDF). P. centaureae loki, Provo Peak, UTAH CO., 29 June 1979 (JMJ). P. c. communis, Antelope Island, DAVIS CO., 1 Aug 1970 (DLE); Benjamin, UTAH CO., 15 July (JMJ). P. pirus, Crouse Cn, DAGGETT CO., 14 Aug (BFC); same place, 2 Aug (CDF). H. pahaska, same place, 14 Aug (BFC). O. yuma, small stand of Phragmites communis, same place, 15 Aug (BFC). M. coloradensis, sighting, Peters Cr, 6600', San Juan Co., 30 April (RES). P. clodius, Box Elder Cr above Duck Flat, BOX ELDER CO. and NW, 18 June (SFF/PJS). P. indra ssp, Split Mtn., Dinosaur Nat'l Mon, UINTAH CO., 4 July 1975 (K Roever/CFG); edge of cirque, Raft River Mts., BOX ELDER CO. and NW, 10 July 1980 (JMJ); ridge top E of Farmington, DAVIS* CO., 10 July (JMJ). P. i. indra, ridge E of Swasey Peak, House Rg, MILLARD CO., 1 May (SFF/PJS) and ridge above Albion Basin, 10500', Salt Lake Co. and Utah Co., 9 Aug 1980 LATE (PJS). P. zelicaon (yellow fm), summit of Raft Rv Mts., BOX ELDER* CO. and NW, 10 July 1980 (JMJ). P. bairdii (yellow "brucei"), ridge 1 mi S of Provo Peak, UTAH* CO., 29 June 1979 (JMJ); W Tintic Mts., hilltops, JUAB CO., 20 May (PJS). P. eurymedon, ridge E of Farmington, DAVIS* CO., 10 July (JMJ). N. menapia, Whiterocks Rv Rd, 7400', UINTAH CO., 20 July 1978 (K. B. Tidwell/CFG). P. (A.) rapae, SAN JUAN CO., 25 Aug 1981 (CFG). P. (A.) napi, 0.5 mi SSE of Flaming Gorge Dam, 5600', DAGGETT CO., 24 Aug 1975 (CFG). P. protodice, Antelope Island, DAVIS* CO., 1 Aug 1970 (DLE); flying with P. occidentalis without intergradation, Pack Cr Cpgd, 6200', San Juan Co., 3 Aug (CDF). P. beckerii, 2 mi S of Little Duncan Mtn., SEVIER* CO., 10 June and 12 July (JMJ). P. sisymbrii, Manderfield, BEAVER CO., 17 Apr (JMJ). A. sara, Pin Hollow, Old Woman Plateau, SERVIER* CO., 10 June (JMJ). A. thoosa, Hwy 163 at cn 12 mi NNE of Blanding, 7000', San Juan Co., 30 Apr (RES). E. ausonides, S Fk of Chalk Cr, Pavant Mts., 5 mi E of Fillmore, MILLARD CO., 24 May (PJS). C. eurytheme, 1 mi E of Eureka, JUAB* CO., 20 Sep 1980 (JMJ). C. philodice, E Tintic Mts., JUAB* CO., 4 July 1979 (JMJ). C. alexandra, Skyline Dr above Bountiful, DAVIS CO., 19 June (SFF). C. (Z.) cesonia, 7 mi NE of Moab, GRAND CO., 18 July 1973 (CFG). N. iole, in forest along SE end of Sheep Cr Cn loop rd, DAGGETT CO., 12 July 1978 (DLE); Johnson Cn, Deep Cr Mts., JUAB CO., 15 July (PJS). T. arota, N Walker Cr, E of Oak City, MILLARD* CO., 18 July 1980 (JMJ); Mill Hollow, Diamond Fk Cn, UTAH* CO., 24 July 1980 (JMJ). L. (C.) heteronea, Old Woman Plateau, SEVIER* CO., 18 July, very common (JMJ). L. (E.) dorcas/helloides castro (submitted as helloides), nr Granddaddy Lk, 10300', S side Uinta Mts., DUSCHESNE CO., 23 July 1933 (A. D. Boyle/CFG). H. crysalus, Pack Cr Cpgd, 6200'-6500', San Juan Co., 3 Aug (CDF); upper crossing Castle Cr, 7100', N side La Sal Mts., GRAND CO., 23 Sept 1980 LATE (CFG); Old Woman Plateau, Little Duncan Mtn., SEVIER* CO., 18 July (JMJ). A. halesus, W Tintic Mts., JUAB CO., 20 May (PJS). H. titus, 0.8 mi E of Dutch John turnoff, UT Hwy 44, 7700', DAGGETT CO., 8 Aug 1981 (CFG). S. behrii, nr Red Cn Overlook, Flaming Gorge Nat'l Rec Area, DAGGETT CO., 12 July 1978 (DLE); N of Fairview, SANPETE CO. and UTAH CO., 21 Aug 1979 (JMJ). S.

fuliginosum, 1 mi N of Camel Pass, UTAH CO. and SOUTH, 25 Aug 1979 LATE (JMJ). *S. californica*, same place as *behrii*, DAGGETT CO., 12 July 1978 (DLE). *S. saepium*, same place as *titus*, DAGGETT CO., 8 Aug 1981 (CFG); Clipper Ridge 8500', Oquirrh Mts., TOOELE CO., 9 Aug 1981 (PJS). *Callophrys "paradoxa"* (mss name PLE, RES), along UT Hwy 163 at Comb Wash 5000' and at bottom of grade W of Lee's Rch 5300', SAN JUAN CO. and SOUTH, 30 Apr (PLE and DJF/RES). *M. spinetorum*, The Cockscomb, Kane Co. (earlier record by K. Roever 1973), 31 May (SFF, PJS); Peters Cn., 6800', 9 mi N of Monticello, San Juan Co. (earlier record by K. Roever), 30 Apr (RES). *I. eryphon*, nr Clear Cr Cpgd, Raft Rv Mts., BOX ELDER CO., 11 July 1980 (JMJ); Johnson Cn, Deep Cr Mts., JUAB CO., 22 June and later (PJS). *I. augustus iroides*, S base Little Duncan Mtn., Old Woman Plateau, SEVIER CO. and SOUTH, 10 June (JMJ). *I. fotis*, nr Leamington Ps, Canyon Mts., MILLARD CO., 28 Apr-May (PJS); 0.5-3 mi E of Comb Wash, Hwy 163, San Juan Co. (earlier Roever record), 30 Apr (RES). *S. melinus*, Benjamin, UTAH* CO., 8 July '79 (JMJ). *L. marina*, Benjamin, UTAH* CO., 29 Sept '79 (JMJ). *A. glandon (=franklinii) rustica*, Summit Sps GS, 2.8 mi W of Dowd Sp, DAGGETT CO., 7 Aug '65 LATE, USU coll'n (CFG). *P. saepiolus*, Middle Cn, Oquirrh Mts., 7000', TOOELE CO., 15 June '81 (PJS). *P. acmon* (tentatively), N Walker Cn, E of Oak City, MILLARD CO., 18 July '80 (JMJ). *A. mormo*, Sheep Cr, 4 mi S of Manila, DAGGETT CO., 20 Aug '49 (V. M. Tanner/CFG); 1 mi E of Eureka, UTAH CO., 2 Aug (JMJ). *S. edwardsii* and *S. aphrodite*, Crouse Cn, 6200', Daggett Co., 14-15 Aug (BFC). *S. egleis*, 0.5 mi W of Pipe Cr, Lowline Trail 7000', DAGGETT CO., 12 Aug '75 (CFG); Dalton Sp, Abajo Mts., 8400', SAN JUAN CO., 5 July '47 (J. C. Downey/CFG). *S. mormonia*, same data, SAN JUAN CO. (JCD/CFG). *E. claudia*, Lakepoint Jct, TOOELE CO., 15 June (SFF). *V. atalanta*, old La Sal rd nr Castleton, 6000', GRAND CO., 17 Oct (CFG); E Tintic Mts., 10 mi S of Eureka, JUAB* CO., 20 June '80 (JMJ); Payson, UTAH* CO., 14 July (JMJ); hilltops in Church Mts., MILLARD* CO., 20 May (PJS); along UT Hwy 163, Cedar Mesa, 6400', SAN JUAN CO. and SE, 30 Apr (DJF/RES). *V. cardui*, US Hwy 89 at Ephraim, SANPETE CO., 6 May 41 (H. W. Pickett/CFG). *V. (carye) annabella*, Castle Cr, 7100', La Sal Mts., GRAND CO., 23 Sept '80 (CFG); 2.5 road mi S of La Sal Loop turnoff, E side US Hwy 163, 5100', SAN JUAN CO., 18 Oct (CFG). *L. (B.) archippus*, Crouse Cn, 6200', DAGGETT CO. and NE, 14-15 Aug (BFC). *A. bredowii eulalia*, nr Clear Cr Cpgd, 3.4 mi S of ID line, Raft Rv Mts., BOX ELDER CO. and NORTH, 11 July '80 (CFG); Bear Cn, E of Mona, JUAB* CO., 11 Sep (JMJ). *C. pertepida dorothea*, N Walker Cn, E of Oak City, MILLARD CO. and NORTH, 18 July '80 (JMJ). *C. pegala*, Crouse Cn, 6200', DAGGETT CO., 14-15 Aug (BFC); Benjamin, UTAH* CO., 25 June (JMJ). *C. sthenele masoni*, Pack Cr Cpgd, 6200'-6500', La Sal Mts., San Juan Co., 3 Aug (CDF); Lucerne Valley, 3 road mi W of Manila, 6800', DAGGETT CO., 7 Aug 81 (CFG). *N. ridingsii*, W of Little Valley 7500', Sheeprock Mts., TOOELE CO., 2 July (PJS). *O. chryxus*, above Rocky Sps, Deep Cr Mts., TOOELE CO., 29 June (PJS); Chicken Sps and Johnson Cn, Juab Co., 22 June thru July, common (PJS). *O. jutta*, UT HWY 44 nr Uintah Co. line, 8000', DAGGETT* CO., 12 July '78 (DLE). *D. plexippus*, over 40 seen, Crouse Cn, 6200', Daggett Co., 14-15 Aug (BFC).

COLORADO. Contributors: GJB, JJB, BFC, LC, DLE, CDF, MSF, SAJ, RLK, RHL, RCR (including Mark E. Rosché and Dorothy J. Rosché), CPS, JAS, RES [including Katharine, Linda and Scott Stanford; Peter L. Eades, (PLE) and David J. Ferguson, (DJF)], MET, WDW. It was about an average season for moths despite colder than usual trapping conditions (BFC), but was by far the worst butterfly year since the mid 1960s. Butterfly species diversity was normal, but numbers were as low as 5-10% of average, especially in the mountains. A beautiful sunny day in late July resulted in only 6 specimens at Loveland Pass (RES)! I don't have an explanation for this since we had a cool wet spring followed by a warm dry summer. [Ed. note: A contributing factor might be that on July 10-11 at Loveland Pass there were still thick snowbanks at roadside and also in the meadows and rockslides and several successive storms brought hail, sleet, snow, freezing rain and subfreezing temperatures.] The annual Gilpin County July 4th count produced 90 butterfly species, compared with our previous year's 97 species. For moths, BFC recorded over 100 species including 15 sphingids and 23 arctiids. B/L = Boulder Co. and Larimer Co.

MOTHS: SPHINGIDAE: *Ceratonia undulosa*, Ft. Collins, Larimer Co., 13 June (BFC). *Eumorpha achemon*, Rist Cn, Larimer Co. 10 June (BFC). *Euproserpinus wiesti*, only a few recorded due to poor weather; fewer than 12 larvae in June-July (BFC). *Hemaris diffinis*, common in Larimer Co., late Aug-mid Sept (BFC). *Manduca quinquemaculata* and *M sexta*, Boulder Co. and Larimer Co. in June; larvae on tomatoes in late summer (BFC). *Pachysphinx modesta*, common in Boulder Co. and Larimer Co., late June-early July (BFC). *Paonias myops*, canyons, Larimer Co., mid-late June (BFC). *Smerinthus cerisyi*, B/L, June-July; Gunnison Co., early Aug (BFC). *S. jamaicensis*, rare, Larimer Co., June (BFC). *Sphinx chersis*, B/L, June-early July (BFC). *S. gordius*, canyons, Larimer Co., late June (BFC). *S. vashti*, common B/L, June-July; Gunnison Co., late July (BFC). SATURNIIDAE: *Agapema homogena*, Sanborn Rch, 5 mi S of Florissant, Teller Co, 21 July (GJB). *Antheraea polyphemus olivacea*, Aspen, Pitkin Co., 11 July (WDW). *Automeris io*, fairly common, lower canyons, Larimer Co., June (BFC). *Coloradia pandora*, common, B/L mid-June/mid-July (BFC). ARCTIIDAE: *Aemilia ambigua*, B/L, June-July (BFC). *A. roseata*, at blacklight, Allenspark, BOULDER CO. and possible STATE record, 15 July (WDW). *Apantesis figurata*, B/L, June-July (BFC); Unawep Cn, Mesa Co, 4 July (RLK). *A. nevadensis*, Unawep Cn, Mesa Co., 28 Aug (RLK). *A. vittata*, Boulder Resvr, BOULDER CO. and STATE record, 5-7 May (BFC). *A. williamsi*, B/L, June-July (BFC). *Arachnis picta*, B/L, June-July (BFC). *Arctia caia*, Unawep Cn, Mesa Co., 4 July and 28 Aug (RLK). *Diacrisia vagans*, B/L, June-July (BFC). *Estigmea acrea*, B/L, June-July (BFC). *Euchaetis oregonensis*, B/L, June-July (BFC). *Halisidota argentata*, Unawep Cn, Mesa Co., 4 July (RLK). *H. maculata*, B/L, June-July (BFC). *H. tessellaris*, B/L, June-July (BFC). *Hemihyalea labecula*, B/L, June-July (BFC); Unawep Cn, Mesa Co. 28 Aug (RLK). *Holomelina fragilis*, abundant, B/L, Douglas Co., Jefferson Co., Weld Co., June-July (BFC). *Hyphantria cunea*, Larimer Co., June-July (BFC). *Hyphoraia parthenos*, Rocky Mt Nat'l Park, Larimer Co., 10 July (BFC). *Isia isabella*, B/L, June-July (BFC); common, Unawep Cn, 4 July (RLK). *Parasemia plantaginis*, B/L, June-July (BFC). *Pygarctia spraguei*, Bijou Cr, 11 mi S of Wiggins, MORGAN CO. and first modern record, 9 July (BFC). *Turuptiana permaculata*, B/L, June-July (BFC). NOCTUIDAE: *Benjaminia colorada*, Grand Junction, Mesa Co., 13 July (RHL). *Syneda adumbrata*, Poudre Cn, 6100', Larimer Co. 7 June (CDF). *Syngrapha falcifera*, Spring Cn Dam, 5000', Larimer Co., 17 June (CDF). LASIOCAMPIDAE: *Malacosoma* (several sp), Unawep Cn, Mesa Co., 4 July (RLK). GEOMETRIDAE: *Epirrhoe tristata*, Poudre Cn, 6100', Larimer Co., 7 June (CDF). *Hesperumia sulphuraria*, Spring Cn Dam, 5000', Larimer Co., 23 June (CDF). COSSIDAE: *Prionoxystus* sp, Delta, Delta Co., 30 May (RLK). PYRALIDAE: *Cataclysta cappsii*, Grand Jct, Mesa Co., 13 July (RHL). CTENUCHIDAE: *Scepsis fulvicollis*, "wiesti spot", WELD CO., 11 Aug (BFC). SEISIIDAE: 7 undet sp, same spot and date (BFC).

BUTTERFLIES: *E. clarus*, Paonia Resvr, GUNNISON CO., 1 Aug (BFC). *E. icelus*, Windsor, WELD CO. and EAST, 25 May (BFC) (odd - ?windblown stray). *E. brizo burgessii*, Chico Cr, 7000', 1.9 mi S of Egnar, SAN MIGUEL CO., 1 May (RES). *E. horatius*, cn N of Hwy 90 nr UT line, 6000', Montrose Co., 29 April EARLY (RES). *E. pacuvius* (tentative), Uncompaghe Plateau, 8500', MONTROSE CO. and NW, 13 June (RLK). *E. afranius* (tentative), nr Cross Cr Cpgd., 8900', above Beaver Crk Resvr, RIO GRANDE CO. and HIGH ALT, 6 July '78 (DLE). *P. scriptura*, Spring Cn Dam, 5000', LARIMER CO. and NORTH, 12 July (CDF). *P. pirus*, Maroon Lk, 10000', PITKIN CO., 31 July (BFC). *H. phyleus*, 3 mi W of Ellicott, EL PASO CO. and STATE record, 5 Sept. '67, det RES Jul '82 (SAJ). *S. morrisoni*, USAF Acad, El Paso Co, 25 Apr EARLY (RES). *H. uncas*, above timberline on Mt Lincoln, HIGH ALT, Park Co., 30 July (JAS). *H. pahaska*, W side Weston Ps Rd, 9500' HIGH ALT, LAKE CO., 2 Aug (BFC); Warner Pt Tr, Black Cn Gunn Nat'l Mon., MONTROSE CO., 11 July '78 (DLE). *H. ottoe*, Spring Cn Dam, 5000', Larimer Co., 12 July (CDF). *P. sabuleti*, Rubideau Cn, MONTROSE CO., 20 Sept LATE (RLK). *P. draco*, nr Cross

Cr Cpgd, 8900', above Beaver Cr Resvr, RIO GRANDE CO., 6 July '78 (DLE). *P. themistocles*, Buttermilk Cr, 5200', 8 mi W of Olathe, MONTROSE CO., 29 Aug '81 (RLK). *P. mystic dacotah*, Chimney Gulch, Mt. Zion, 6200', Jefferson Co., 3 July (RES). *P. sonora utahensis*, 5-7 mi SW of Creede, on Rio Grande Rv, MINERAL CO., 20 July (MET). *O. snowi*, same data, MINERAL CO. (MET). *A. arogos iowa*, Spring Cn Dam, Larimer Co., 7 July (CDF). *E. vestris kiawah*, same data (CDF). *A. hianna turneri*, Lower Rist Cn, 5900', confirmatory Larimer Co. record, 26 May (CDF). *A. aenus* and *A. oslari*, fresh, Clear Cr Cn, Jefferson Co., 3 July LATE (RES). *L. eufala* and *L. accius*, 3 mi W of Ellicott, EL PASO CO. and STATE records, 5 Sept. '67 (following a major hurricane south of Colorado), det RES July '8s (SAJ). *B. philenor*, Ft Morgan, MORGAN CO., 29 Aug '77 (J. C. Rigli, fide JAS). *P. zelicaon*, Lizard Head Ps, 10250', SAN MIGUEL CO., 27 June (RLK); Carroll Lakes, Rampart Rg, 8600', EL PASO CO., 23 June '60 (SAJ). *P. sisymbrii*, Chico Cr, 7000', 1.9 mi S of Egnar, SAN MIGUEL CO., 1 May (RES). *E. hyantis*, same data, SAN MIGUEL CO. (RES). *C. scudderii*, E side Independence Ps, Lake Co., 23 July (GLB). *A. clorinde*, 10 mi NE of Weldona, MORGAN CO. and probably FIRST state record, late summer '28 (Howard Rollin, fide JAS). *E. mexicana*, Maroon Lk, 10000', PITKIN CO., 31 July (BFC); Leavick Valley, 11000', Park Co., 14 July (JJB). *L. (E.) helloides*, Mud Sp Draw, N of Craig, MOFFATT CO., 19 July (RLK). *H. crysalus*, common, S side Grand Mesa, Delta Co., 4 July-22 Aug (RLK). *A. haleus*, reared from larvae taken on juniper mistletoe, Unawep Cn, Mesa Co. (RLK). *S. (C.) behrii*, OURAY CO., 10 July '78 (DLE). *S. calanus godarti* and *S. liparops aliparops*, Current Cr, 8100', 5 mi SE of Guffey, PARK CO., 3 Aug (BFC). *C. s. sheridanii*, ridge of Mt Elbert, 12300' HIGH ALT, 10 July '65 (SAJ). *C. s. neoperplexa*, Chico Cr, 7000', 1.9 mi S of Egnar, SAN MIGUEL CO., 1 May (RES, PLE, DJF). *C. "paradoxa"*, 2 mi S of Uravan, 5200', SOUTH, Montrose Co., 1 May (RES). *S. melinus*, photo record, KIT CARSON CO., 27 June '70 (DLE). *H. (E.) isola*, SAN JUAN CO., 9 July '78 (DLE). *E. amyntula*, Lizard Head Ps, 10250' ?HIGH ALT, San Miguel Co., 27 June (RLK). *C. argiolus (ladon) sidara* (replacement name for Front Rg material), Poudre Cn, 6100', Larimer Co., 26 May-7 July (CDF). *G. pius*, NW of Cowdrey, Jackson Co. (first recorded there by DJF in 1975), 20 July (RCR). *L. argyrognomon (idas) sublivens*, S Mineral Cr, 9700', 5 mi W of Silverton, San Juan Co. 7 July '78 (DLE). *L. melissa*, 5-7 mi SW of Creede along Rio Grande Rv, MINERAL CO., 20 July (MET). *P. saepiolus*, second generation!, foothills, Larimer Co., late Sept-mid Oct (BFC). *P. acmon*, texanus phenotype, 5-7 mi SW of Creede, along Rio Grande Rv, MINERAL CO., 20 July (MET); lutzi/spangelatus phenotype, above timberline nr Mt Bross, Park Co., 31 July, assoc with *Eriogonum flavum* var. *xanthum* (JAS). *E. battoides centralis*, D Mtn, Del Norte, Rio Grande Co., 28 July, abundant but flown (MSF). *A. nais*, Mt. Zion, Jefferson Co., 3 July (RES). *B. (P.) eunomia caelestis*, Boulder Cr Park, 10000', Summit Co., 1 Aug (RES). *B. (C.) selene tollandensis*, Cascade Cr, 9000', 24 mi S of Silverton, SAN JUAN CO., 6 July (SAJ). *S. nokomis*, two places 10 mi apart, Ouray Co. (original type locality), 6 Sept, Unawep Cn, Mesa Co., 29 Aug (first seen there since '78); N of Durango, La Plata Co., 5 Sept. (all RLK). *S. coronis*, *S. aphrodite byblis*, *S. atlantis nikias*, *S. cybele charlotti*, sympatric on S side of Grand Mesa, 7500', Delta Co., 7 Aug (RLK). *S. aphrodite*, W side of Weston Ps, 10000', LAKE CO., 2 Aug (BFC); RIO GRANDE CO., 6 July '78 (DLE). *S. atlantis nikias* and *electa*, both common without intergrades, Boulder Cr, 9000'-10000', Summit Co., 1 Aug (RES). *E. claudia*, Lake City, HINSDALE CO., 22 July (BFC). *C. palla calydon*, 3-7 mi SE of Salida, CHAFFEE CO., FREMONT CO., 15-16 June '81 (BFC). *C. damoetas*, La Garita Wilderness, Saguache Co., 10000'-12800', 21-24 July (MET). *P. tharos "A"*, Bijou Cr, 11 mi S of Wiggins, MORGAN CO., 9 July (BFC). *P. pratensis (campestris) camillus*, Bijou Cr, 11 mi S of Wiggins, MORGAN CO., 9 July (BFC); 5-7 mi SW of Creede, along Rio Grande Rv, MINERAL CO., 20 July (MET). *P. interrogationis* and *P. comma* (tentative), Ft Morgan, MORGAN CO., 23 July (J. C. Rigli, fide JAS). *P. faunus hylas*, nr Cross Cr Cpgd., 8900', above Beaver Cr Resvr, RIO GRANDE CO., 6 July '78 (DLE); Umberpahgre Plateau, 9000', MONTROSE CO., 13 June (RLK). *N. antiopa*, Leadville, LAKE CO., 2 Aug (BFC). *V. atalanta*, hibernating adults found in Lakewood 3 Oct and Boulder 15 Nov (JAS). *V. cardui*, SAN JUAN CO., 8 July '78 (DLE). *V. (carye) annabella*, Maroon Lake, 10000', PITKIN CO., 31 July (BFC). *A. andria*, Ft Morgan, MORGAN CO., several summer records (J. C. Rigli, fide JAS); Lower Rist Cn, 5900', LARIMER CO., 26 May (CDF). *N. (A.) milberti*, Ft Morgan, MORGAN CO., several summer records (J. C. Rigli, fide JAS). *C. pertepida dorothea*, 5 mi S of Cripple Creek, TELLER CO., 23 July (LC). *E. callias*, Spring Cr and San Luis Peak, 11000-13000', SAGUACHE CO., 22 July (MET). *E. magdalena*, Horseshoe Mtn, Park Co., 22 July (GJB). *N. ridingsii*, Cowdrey-Walden area, JACKSON CO., 6 July '72 and July '82 (RCR). *O. chryxus*, nr Equity Mine, 6 mi N of Creede, MINERAL CO., 20 July (MET). *O. uhleri reinthali*, La Garita Wilderness, 10000'-12800', HIGH ALT., Saguache Co., 21-24 July (MET). *O. jutta reducta*, Boulder Cr., 9000', Summit Co., 31 July (RES). *O. polyxenes brucei*, Weston Ps, Park Co., 2 Aug (BFC). *O. taygete edwardsii*, on wing 5 Jul-2 Aug in Sawatch Rg (CPS); genitally verified specimen from Rocky Mtn Nat'l Park, 12700', LARIMER CO. and NORTH and in need of confirmation, 16 June '81 (BFC). TOTALS: 3 STATE records and 57 COUNTY records (butterflies).

NEW MEXICO. Contributors: JCC (including Joan Coleman), SJC, CDF, GSF, JPF, SAJ, RHL, JM, RES (including Katharine, Linda, Scott Stanford), MET. As elsewhere in Zone 3, 1982 was cloudier, cooler and rainier than most seasons. Most butterfly and moth species were down in numbers. SJC and SAJ collected independently in Harding Co., raising the known butterfly species from this county from 5 to 30. Much of eastern NM is unexplored for butterflies, and even more unknown for moths. There were 59 COUNTY records for butterflies, including 1 STATE record. Many of the moth data are probably new also.

MOTHS: SPHINGIDAE: *Pachysphinx occidentalis*, E Fk Gila Rv, 8000', Grant Co., 25 July (JJC). *Paonias excaecatus*, Sandia Mtns., Bernalillo Co., 8-20 July (JJC). *P. myops*, Sandia Mtns., Bernalillo Co., 8 July (JJC). *Smerinthus cerisyi*, same data (JJC). LASIOCAMPIDAE: *Gloveria arizonensis*, Grant Co., Sandoval Co., and Socorro Co., 25 July-30 Aug (JJC). *Quadrina diazoma*, Iron Rv Cpgd, Black Rg, Grant Co., 26 July (JJC); Water Cn, Magdalena Mts, Socorro Co., 21 Aug (JJC). SATURNIIDAE: *Antheraea polyphemus oculea*, Cienega Cn, Sandia Mtns., Bernalillo Co., 1 July (JJC); 4th July Cpgd, Manzano Mts., Valencia Co., 6 July (JJC). *Automeris io neomexicana*, Sandia Mtns., Bernalillo Co., 26 June, 1 July (JJC). *A. pamina*, Water Cn, Magdalena Mts., Socorro Co., 21 Aug, larvae (JJC). *Hemileuca hera magna*, 9 mi W of Albuquerque, Bernalillo Co., 1-22 Sept (JJC). ARCTIIDAE: *Hemihyalea labecula*, Cienega Cn, Sandia Mtns., Bernalillo Co., 20 July (JJC). NOCTUIDAE: *E. odora*, Juan Tabo Cn, Sandia Mtns., Bernalillo Co., 8 July (JJC). PERICOPIDAE: *Daritis thetis*, E Fk Gila Rv, 8000', Grant Co., 25 July (JJC); Water Cn, Magdalena Mts., Socorro Co., 21 Aug (JJC). RHL reported the following: Las Cruces, 3 Sept.: *Archanara oblonga*, *Trichocosmia drasterioides* (Noctuidae). White City, Eddy Co., 6 Sept.: *Apatelodes angelica seraphica* (Apatelidae); four sp of *Schinia* (Noctuidae); 14 sp of Acontiinae incl *Drasteria mirifica klotsi*. Silver City, 6000', Grant Co., 7 Sept. over 100 Noctuids incl 7 sp of *Schinia*, 5 sp of *Pseudanarta*, and *Oncocnemis obscurata*. All remaining moth data are from CDF. Signal Peak Rd, 8500', Grant Co., 23 June: *Lycomorpha grotei*. Silver City, Grant Co., July: *Antheraea polyphemus oculea*, *Automeris pamina*, *Eumorpha achemon*, *Gloveria arizonensis*. Cherry Cr Cn, 6750', Grant Co., 12-13 Aug: *Arachnis picta*, *Biston betularia cognataria*, *Dicogaster coronada*, *Galenara lallata*, *Hemihyalea labecula*, *Hyles lineata*, *Leucanopsis lurida*, *Pero modestus*, *Phaeoura belua*, *Prochoerodes forficaria catenulata*, *Smerinthus cerisyi*, *Stenoporpia glaucomarginaria*, etc. Gallinas Cn, 6700', Grant Co., 16 Aug: *Amathes c-nigrum*, *Catocala euphemia*, *Coloradia pandora davisii*, *Dasychira vagans grisea*, *Dicogaster coronada*, *Evergestis obliquialis*, *Galenara lallata*, *Hemihyalea ?labecula*, *Pero modestus*, *Phaeoura belua*, *P. mexicanaria*, *Spargania viridescens*, *Stenoporpia macdunnoughi*, etc. Water Cn, Magdalena Mts., 7000', Socorro Co., 17 Aug: *Arachnis*

picta, Catocala euphemia, C. violenta, Dicogaster coronada, Hemihyalea labecula, Papaipema sp., Pero modestus, Tolype distincta, etc. Jemez Mtns., 7900', Sandoval Co., 18-19 Aug: Amphipoea sp., Apantesis sp., Campaea perlata, Catocala groteiana(?), C. ?faustina, Enypia griseata, Eulithis propulsata, Galenara lallata, Gnophaela vermiculata, Lacinipolia renigera, Nepytia swettii, Papaipema sp., Polia sp., Sicya macularia, Sparangia viridescens, Synanthedon sp., Xanthorhoe dentilinea, X. m. munitata, etc. Sugarite Cn, 7300', Colfax Co., 23 Aug: Amphipoea ?americana, Catocala violenta, Eucirrhodea pampina, Evergestis ?obliquialis, Feltia herilis, Haploa lecontei, Hemihyalea labecula, Itame flavicaria, Papaipema sp., Polychrysis morigera, Pseudeva purpurigera, Scoliopteryx libatrix, Semiothisa sp., Tolype glendwoodii, etc.

BUTTERFLIES: Z. dorus, Dalton Cn, San Miguel Co., 8-9 May (SJC). A. casica (tentative), Post Office Cn, Peloncillo Mts, nr Rodeo, Hidalgo Co., 30-31 July (SJC). T. mexicana dobra, 1.9 mi S of 1200' well, Caja del Rio Grant, Santa Fe Co., 1 July (JPF). E. telemachus, Canadian Rv Cn nr Mills Cpgd., HARDING CO., 15-16 May (SJC); Santa Fe Ski Basin, SANTA FE CO., 3 July, tentative det (SJC). E. afranius, Sandia Mtns., 8320', Bernalillo Co., 2 July (JPF). E. persius, Rio Hondo, 9000', Hwy 150, TAOS CO., 5 July (SAJ); Tree Spg, 5.1 mi W of San Antonito, BERNALILLO CO., 2 July, det RES (JPF). A. arene, Sycamore Cn, Grant Co., 1 Nov '81 LATE (CDF). H. uncas, Hwy 39 at Ute Cr, 25 mi SE of Mosquero, HARDING CO., 3 July (SAJ). H. pahaska williamsi, Post Office Cn, Peloncillo Mts, nr Rodeo, Hidalgo Co., 30 July (SJC). H. viridis, nr Mills Cpgd., Canadian Rv Cn, HARDING CO., 26 June (SJC). A. campestris, Hwy 39 at Ute Cr, 25 mi SE of Mosquero, HARDING CO., 3 July (SAJ). O. snowi, Dalton Cn, San Miguel Co., 14 Aug (SJC). E. vestris kiowah, Tree Spg., 5.1 mi W of San Antonito, Bernalillo Co., 2 July (JPF). A. simius, nr Mills Cpgd., Canadian Rv Cn, HARDING CO., 26 June (SJC). A. aenus and A. oslari, same locality, HARDING CO., 15 May (SJC). A. eos, Hwy 39 at Ute Cr, 25 mi SE of Mosquero, HARDING CO., 3 July (SAJ). A. species nr eos (with white DFW cell spot), Post Office Cn, nr Rodeo, Peloncillo Mts., HIDALGO CO. and STATE record, 30 July (SJC). A. texanae, same data, (SJC). B. philenor, Canadian Rv Cn, HARDING CO., 3 July (SAJ); Leasburg St Park, Doña Ana Co., 27 Mar EARLY (RES). P. multicaudatus, Canadian Rv Cn, HARDING CO., 15 May-30 Aug (SJC); Taos Ski Valley, TAOS CO., 17 July (SJC). N. menapia, Red Rv Cn, TAOS CO., 29 June '80 (SJC). P. (A.) rapae, Post Office Cn, nr Rodeo, Peloncillo Mts., HIDALGO CO., 30 July (SJC). P. protodice, Canadian Rv Cn, HARDING CO., 26 June (SJC). C. philodice, 5 mi SE of Ramón, DE BACA CO., 4 Sept. (SJC). Z. cesonia, Canadian Rv Cn, HARDING CO., 3 July (SAJ). K. lyside, Alto, LINCOLN CO., 5 July '81 (SJC). N. iole, Leasburg St Park, Doña Ana Co., 27 Mar EARLY (RES). A. halesus, 6 mi NE of Monticello, San Mateo Mts., Sierra Co., 27 Mar EARLY (RES). M. leda, Eagle Cr, 8000' HIGH ALT, E of Sierra Blanca, Lincoln Co., 8 July (GSF). M. siva, Canadian Rv Cn, HARDING CO., 15 May (SJC). M. spinetorum, Dalton Cn, SAN MIGUEL CO., 14 Aug (SJC). S. melinus, Canadian Rv Cn, HARDING CO., 30 Aug (SJC). E. quaderna, Luna Park Cpgd. 6800', San Mateo Mts., Socorro Co., 27 Mar (RES). B. exilis, Leasburg St Park, Doña Ana Co., 27 Mar EARLY (RES). L. marina, Canadian Rv Cn, HARDING CO., 15 May (SJC). H. isola, same data, HARDING CO. (SJC); 5 mi SE of Ramón, DE BACA CO., 4 Sept. (SJC). H. ceraunus gyas, Grapevine Cn, Sacramento Mts., OTERO CO., 6 July '80 (JM); Sitting Bull Falls, Guadalupe Mts., EDDY CO., 4 Sept (SJC). E. amyntula, Rio Hondo, 8900'-9100', TAOS CO., 5 July (SAJ). C. argiolus (ladon) cinerea, Pines Cpgd., nr Cloudcroft, Otero Co., 5 June (SJC). L. melissa, Canadian Rv Cn, HARDING CO., 15 May and 30 Aug (SJC). P. acmon, odd phenotype with reduced blue scaling VHW, Hwy 39, 2 mi N of Co line, HARDING CO., 3 July (SAJ). C. nemesis, Box Cn Dam, DOÑA ANA CO., 19 Sept (GSF). A. mormo mejicanus, Texas Cn, E side of Organ Mts., DOÑA ANA CO., 17 May 80 (JM). E. claudia, Canadian Rv Cn, HARDING CO., 15 May-30 Aug (SJC); 5 mi SE of Ramón, DE BACA CO., 4 Sept (SJC). T. leanira fulvia, nr Cerrillos, SANTA FE CO., 23 May '81 (SJC). C. lacinia crocale, hill behind St. John's College, SANTA FE CO., 20 July (SJC); Trigo Cn, Manzano Mts., TORRANCE CO., 28 July (MET). P. tharos, Sta Barbara Cn, TAOS CO., 18 July '81 (SJC). P. mylitta callina, Tree Spg, 5.1 mi W of San Antonito, Bernalillo Co., 2 July (JPF). P. zephyrus, 6 mi NE of Monticello, San Mateo Mts., SIERRA CO., 27 Mar (RES). N. antiopa, same data, SIERRA CO. (RES); Canadian Rv Cn, HARDING CO., 26 June (SJC). V. atalanta, Sitting Bull Falls, Guadalupe Mts., EDDY CO., 4 Sept (SJC). V. cardui, Canadian Rv at Hwy 120, HARDING CO., 3 July (SAJ). V. (carye) annabella, nr Cloudcroft, Otero Co., 5 June (SJC). B. archippus obsoleta, Box Cn Dam, DOÑA ANA CO., 18 July (GSF). A. bredowii eulalia, Tolby Cr Cn, nr Eagle Nest, COLFAX CO., 31 Aug 80 (SJC). A. andria, Canadian Rv Cn, HARDING CO., 3 July (SAJ). A. celtis antonia, Canadian Rv Cn, HARDING CO., 26 June (SJC). C. pertepida dorothea, Water Cn, Magdalena Mts., 7000', SOCORRO CO., 18 Aug (CDF); Canadian Rv Cn, HARDING CO., 26 June (SJC). C. p. avicula, La Cueva Park, W side of Organ Mts., DOÑA ANA Co., 5 June (SJC); Klondike Gap, Guadalupe Mts., Eddy Co., 5 Sept (SJC). C. pegala ssp., Canadian Rv Cn, HARDING CO., 30 Aug (SJC). C. meadii mexicana, Water Cn, 7000' Magdalena Mts., SOCORRO CO., 17 Aug (CDF). D. plexippus, Hwy 39 at Ute Cr, HARDING CO., 3 July (SAJ); 10 mi SE of Vaughn, GUADALUPE CO., 4 Sept (SJC).



ZONE 4 MANITOBA (no reports), NORTH DAKOTA, SOUTH DAKOTA, NEBRASKA, KANSAS, & TEXAS. Coordinator: H. A. Freeman. Contributors: Jim and Jane Coleman, Clifford D. Ferris, James P. Fitter, H. A. Freeman, E. A. Froehl, John Jordison, John Kemmer, Ed Knudson, Ron Leuschner, Jim Reiser, Richard C., Dorothy E. and Mark E. Rosché and Steve Spomer. Good coverage, especially Nebraska and Texas. Apparently there was good collecting in all of the areas covered.

NORTH DAKOTA. John Jordison reported on collecting in the Little Missouri State Park, Dunn Co., on June 7, 21, July 8 and 26. June 7: Oeneis uhleri abundant on hilltops, G. lygdamus oro common, also got Euchloe olympia and Phyciodes tharos. June 21: Pterourus multicaudatus and P. glaucus canadensis fairly common in draws and along trails; also collected Mitoura siva, Lycaeides melissa, Limenitis weidemeyerii oberfoelli, Polygonia satyrus, Coenonympha inornata benjamini, and Colias philodice. July 8: about the same. July 26: same and in addition Enodia anthedon borealis, Harkenclenus titus, Satyrium acadica, Cercyonis pegala ino, C. oetus, Megisto cymela and Speyeria cybele. The Rosché's reported collecting at Strawberry Lake in the Turtle Mts., Bottineau Co., June 18-23 where they got Thorybes pylades, Carterocephalus palaemon mandan, and Poanes hobomok. On June 24, Theodore Roosevelt Nat'l. Pk., Billings Co., they found Mitoura siva was very common.

SOUTH DAKOTA. The Rosché's reported a new STATE record. Pyrgus scriptura, July 11 in Hot Brook Canyon, Hot Springs, Fall River Co. The following were reported as new COUNTY records for Fall River Co.: Pholisora catullus, June 11, Red Canyon; Hesperia uncus, Sept. 4., Red Canyon; Hesperia comma, Aug. 29, Battle Mt. at Hot Springs; Poanes hobomok, July 11, Hot Brook Canyon; Papilio zelicaon nitra, Aug. 5, Battle Mt.; P. indra, Aug. 7, Shep's Canyon. Pontia protodice, common Aug. 7, at Angostura Reservoir; P. occidentalis, Sept. 4, Red Canyon; Harkenclenus titus, Aug. 29, Battle Mt.; Hemiargus isola alce, Aug. 5, Cold Brook Reservoir; Lycaeides melissa, common; Icaricia acmon texana, June 11, Edgemont; Speyeria edwardsii, Aug. 5, Battle Mt. Custer Co. & Shannon Co. about the same as Fall River Co.

NEBRASKA. Steve Spomer and Jim Reiser reported 63 county records and the Rosché's reported new county moth records for Sioux Co. (5 species), Dawes Co. (4 species) and Sheridan Co. (24 species). Due to space, these will not be listed here, however, the coordinator will be glad to send this information to any interested person.

MOTHS: John Jordison reported that sugaring for moths was very good in urban parks in west Omaha, Douglas Co., from July to September with the following *Catocala* being collected: *C. ultronia*, *C. amatrix*, *C. innubens* and f. "scintillans," *C. meskei*, *C. neogama* and *C. junctura*. The prize catch was a fresh male *Thysania zenobia* on Aug. 17 at 2130 hours in an urban park in west Omaha. The Roché's report the following moths were collected at light, 12 miles south of Chadron, Dawes Co.: *Ceratonia undulosa*, June and July; *Sphinx chersis*, July and August; *S. vashti*, May to July; *S. drupiferarum*, Aug. 3; *Paonias myops*, July 4; *Pachysphinx modesta*, Aug. 9; *Hemaris diffinis*, July 3; *Eumorpha achemenis*, June 29; *Hyles lineata*, June to Sept.; *Coloradia pandora*, common Aug-Sept.; *Hyalophora gloveri*, June; *Catocala innubens* f. "scintillans," Sept. 7; and *Gloveria arizonensis*, July 1. *Proserpinus juanita* was collected July 3 at Monroe Canyon, Sioux Co. Choice Moths reported by Steve Spomer and Jim Reiser: *Sesia titan*, June 16, Lincoln, Lancaster Co.; *Gloveria arizonensis*, July 12, Monroe Canyon, Sioux Co., two at blacklight; *Apantesis phyllira*, forms with dark hindwings, July 12, Monroe Canyon, Sioux Co., at blacklight. Cliff Ferris reports: Sioux Co., Monroe Canyon, Pine Ridge Area (3 visits) June 4; *Hemaris diffinis*, *Alypia octomaculata* and *Pyrausta unifascialis* ssp. June 28; *Sphinx vashti*, *Smerinthus jamaicensis*, *Paonias myops*, *Darapsa myron*, *Ceratonia undulosa*, *Automeris io*, *Antheraea polyphemus*, *Hyalophora cecropia*, *Estigmene congrua*, *Euchaetias oregonensis*, *Loxostege cereralis*, *Evergestis vinctalis*, *Pseudaletia unipuncta*, *Leucania commoides*, *Chorizagrotis axillaris*, and several undet. species of *Zale*. July 26-27; *Ceratonia undulosa*, *Pachysphinx modesta* (pale form), *Phyllodesma americana*, *Malacosoma disstria*, *M. californicum*, *Holomelina* sp., *Euchaetias oregonensis*, *Feltia herilis*, *Amathes bicarnea*, *Lacinipolia renigera*, *Calpe canadensis*, *Autographa californicum*, *Polia purpurissata*, *Itame sulphurea*, *Hesperumia sulphuraria*, and *Xanthotype urticaria*.

BUTTERFLIES: Spomer and Reiser report: *Poanes zabulon*, June 5, Indian Cave St. Pk., Nemaha Co. & Richardson Co.; *Staphylus hayhurstii*, June 5, Nemaha Co. & Richardson Co. and June 20, Lincoln, Lancaster Co.; *Polites mystic dacotah*, July 10, Cherry Co. and July 11, Sheridan Co.; *P. origenes rhena*, July 12, Sowberry Canyon, Sioux Co.; *P. themistocles*, Sept. 19, Otoe Co.; *P. coras*, July 11, Sheridan Co., Aug. 21, Lincoln, Lancaster Co. and Sept. 19, Otoe Co.; *Atrytone logan*, Aug. 21, Lincoln, Lancaster Co. and Sept. 10, Saunders Co.; *Atalopedes campestris*, Oct. 30, Furnas Co.; *Lerodea eufala*, Oct. 30, Furnas Co.; *Gaeides xanthoides dione*, June 24, Frontier Co., June 29, Franklin Co. and July 10, Cherry Co.; *Hylolycaena hyllus*, June 23, Furnas Co., June 24, Frontier Co. and June 29, Franklin Co.; *Strymon melinus franki*, June 23, Furnas Co. and July 10, Cherry Co.; *Chalceria rubidus longi*, July 10, Cherry Co.; *Mitoura siva*, July 12, Monroe Canyon, Sioux Co.; *Hemiargus isola alce*, Oct. 30, Furnas Co.; *Icaricia acmon texana*, July 14, Bull Canyon, Banner Co.; *Peniseca tarquinius*, Aug. 17, Saunders Co.; *Megisto cymela*, June 24, Frontier Co. and July 12, Monroe Canyon, Sioux Co.; *Enodia portlandia*, Aug. 9; *Zerene cesonia*, Sept. 19, Otoe Co.; *Phoebis sennae eubule*, Sept. 19, Otoe Co.; *Eurema mexicana*, June 24, Frontier Co.; *Nathalis iole*, June 21, Gage Co. and Oct. 31, Furnas Co.; *Papilio polyxenes asterius*, Aug. 9, Jefferson Co.; *Pterourus multicaudata*, larvae on chokecherry, Aug. 27, Gosper Co.; *P. glaucus*, larvae on chokecherry, Aug. 27, Gosper Co. and Aug. 19, Dawson Co.; *Speyeria idalia*, June 21, Gage Co. and June 21, Jefferson Co.; *S. cybele*, July 10, Sherman Co., Aug. 9, Jefferson Co. and Sept. 19, Otoe Co.; *Phyciodes batesii*, July 11, Sheridan Co.; *P. campestris*, July 14, Bull Canyon, Banner Co.; *Charidryas nycteis*, Aug. 9, Jefferson Co.; *Polygonia comma*, June 24, Frontier Co., Aug. 9, Jefferson Co., Sept. 10, Saunders Co. and Oct. 31, Furnas Co.; *P. progne*, Aug. 9, Jefferson Co.; *P. interrogatoris*, June 23, Furnas Co. and Aug. 9, Jefferson Co.; *Basilarchia archippus*, July 10, Cherry Co., July 12, Monroe Canyon, Sioux Co. and Sept. 10, Saunders Co.; *B. arthemis astyanax*, Aug. 19, Dawson Co.; *Vanessa virginiensis*, June 29, Franklin Co. and Aug. 9, Jefferson Co.; *Asterocampa celtis*, Aug. 9, Jefferson Co.; *Junonia coenia*, Aug. 9, Gage Co.; *Anaea andria*, Aug. 19, Dawson Co. MISCELLANEOUS FOOD PLANTS: *G. x. dione* larva on *Rumex crispus*, May 17, Saunders Co.; *E. olympia* larva on *Sisymbrium* sp., May 19, Nemaha Co.; *B. archippus*, 35 hibernacula on *Salix* sp., 17 Nov., Saunders Co.; three distinct broods of *H. hyllus* were reared on *R. crispus* at the Univ. of Nebr. Field Lab., Saunders Co. MELANICS: *G. x. dione*, male, July 1, Lincoln, Lancaster Co.; *C. r. longi*, female, July 10, Valentine Wildlife Ref., Cherry Co.; *C. eurytheme*, male, July 31, Columbus, Platte Co. Clifford D. Ferris reported: Morrill Co., vic. Reddington, June 28, *Pyrgus communis*, *Colias eurytheme*, *Lycaeides melissa*, *Euptoieta claudia*, *Speyeria coronis* near *halcyone*, and *S. edwardsii*. Sioux Co., Monroe Canyon, Pine Ridge Area (3 visits): June 4, *Epargyreus clarus*, *Pholisora catullus*, *Colias alexandra*, *Euchloe ausonides paleorides*, *E. olympia*, *Glaucopsyche lygdamus oro*, *Incisalia eryphon*, *Strymon melinus franki*, *Phyciodes tharos*, *Polygonia progne*, *Occidryas anicia bernadetta*, *Coenonympha tullia* (cline from ochracea into benjamini) and *Oeneis uhleri* ssp. (close to *uhleri*). June 28, *Epargyreus clarus*, *Oarisma garita*, *Amblyscirtes vialis*, *Colias eurytheme*, *Glaucopsyche piasus daunia*, *Icaricia icarioides lycea*, *Lycaeides melissa*, *Limnitis weidemeyerii oberfoelli*, *Phyciodes batesii*, *P. tharos*, *Polygonia progne*, *Occidryas anicia bernadetta*, *Coenonympha tullia*, *Neominois ridingsii*. July 26-27, *Euphyes vestris kiowah*, *Atrytone logan lagus*, *Epargyreus clarus*, *Poanes taxiles*, *Polites origenes rhena*, *Euphodes multicaudatus*, *Artogeia rapae*, *Colias eurytheme*, *C. philodice*, *Eurema mexicana*, *Everes comyntas*, *Satyrus liparops aliparops*, *Strymon melinus franki*, *Lycaeides melissa*, *Icaricia icarioides lycea*, *Harkenclenus titus*, *Limnitis archippus*, *Asterocampa celtis*, *Charidryas gorgone carlota*, *Limnitis weidemeyerii oberfoelli*, *Nymphalis antiopa*, *Phyciodes batesii*, *P. tharos*, *Polygonia progne*, *P. zephyrus*, *Euptoieta claudia*, *Speyeria coronis* nr. *halcyone*, *S. cybele*, *S. aphrodite*, *Vanessa atalanta rubria*, *V. cardui*, *Cercyonis pegala*, *Megisto cymela*, and *Satyrodes eurydice*. E. A. Froemel reported: for the past twenty years he has had a passion flower vine growing in his garden and the colony of *Agraulis vanillae* that established itself there some years ago is still present.

KANSAS. James P. Fitter reported: Collecting at Ft. Leavenworth, Leavenworth Co., mid June to November resulted in getting 50 species of butterflies with the best catch being a specimen of *Satyrus caryavorus*, July 11, which is very rare for that area. The following moths were collected: *Amphion nessus*, *Darapsa myron*, *Catocala amatrix*, *C. innubens*, *C. insolabilis*, *C. neogama*, *C. piatrix*, *C. residua*, *C. robinsoni*, *C. vidua*, *Euparthenos nubilis*, *Agrotis ypsilon*, *Epiglaea decliva*, *Metaxaglaea inulta* and *Zale lunata*.

TEXAS. BUTTERFLIES: James P. Fitter reported collecting at Ft. Hood Co., Bell Co. and Coryell Co. until mid June and recorded the following species: *Amblyscirtes osleri*, *Erynnis meridianus* (perhaps an eastern record for that species), *Phaenosticton alcestis* (very common especially near the food plant, *Spaindus saponaria* var. *Drummondii*), and *Calycopis isobeon* (also very common). The only butterfly Ron Leuschner collected was *Cyllopsis pertepida avicula* found resting on dead leaves in wooded ravines, Sept. 4-5 in the Davis Mts. of W. Texas. Conditions were very dry. John Kemner reported: Landa Park, Comal Co.; *Incisalia henrici solatus* (Mar. 9), *S. alea* (Nov. 12), and *P. viator* (Mar. 18). Travis Co., *P. m-album* (May 9), *M. rubricata* (May 9), *E. ontario* (May 9), *S. falacer* (May 13). Brewster Co.; *L. marina* (May 28), *P. philetas* (May 28), *T. chinatiensis* (May 28), *T. theona bolli* (May 28), *A. mormo* (May 28), and *E. pollingi* (May 27). E. C. Knudson reported: Big Bend Nat'l Park., March 28, 29 species including *Catactista nimbece* (Pieridae), (second recent record), *Autochton cellus*, *A. cincta*, *Piruna haferniki*, and *Paratrytone melane vitellina*. Hidalgo Co., Santa Ana Refuge, May 29 (Knudson & Richard), 47 species including *Papilio anchisiades idaeus*, *Eresia frisia tulcis* (abundant), *Lymnas pixe*. Same county and date, Bentsen St. Pk., 44 species; the best was *Spathelepia clonius* (Hesperiidae). Starr Co., Falcon St. Pk., May 29, 39 species (none of interest). Hidalgo Co., Santa Ana Refuge, Oct.

23, collecting very poor with Myscelia ethusa being the only prominent species present. H. A. Freeman reports: After a very wet spring in the Dallas area conditions improved with the following being collected; Amblyscirtes vialis (Plano), A. belli (Vickery, Garland), A. celia (Garland), A. nysa (Dallas), Cogia outis (Vickery), Feniseca tarquinius (Garland), Falcapica midea (Plano), Asterocampa celtis and A. texana very common all over Dallas County.

MOTHS: Ron Leuschner reported the following on collecting in west Texas: Campground, S. side Davis Mts., Sept. 4-5, very dry but the following moths were collected: (Noctuidae), Lacin. marinitincta, Synorthodes auriginea, Pseudorgyia versuta, Orthodes jacosca, and Acopa perpallida, all good catches. (Geometridae), Hydrio. obliquilinea (possibly Texas record as the T. L. is Utah). Near Ft. Davis, along roadside, Sept. 5: (Sesiidae), a female Melitta grandis was collected. Limpia Creek, outside of Ft. Davis, Sept. 5: (Noctuidae), Pseudanarta daemonalis, Ianus mosca (second record for Texas). (Geometridae), Stenoporpia margueritae farina, Meris petila, and Euphyia swetti. (Ethmiidae), Ethmia hagenella. Kemner reports: M. hermosa, Brewster Co. (May 28), M. snowi, Mansfield Dam, Travis Co. (May 21). E. C. Knudson reported: Big Bend Nat'l Park., March 28-29; 133 species collected with the best being (Noctuidae), Meleneta antennata, Xylomiges variabilis, Oncocnemis cottami, O. heterogena, Zale termina, Z. colorado, Ulosyneda valens, (Geometridae), Synomila subcreata, Eupithecia ornata, C. placidata, C. alpinata, C. bolteri, Hydriomena costipunctata, Iridopsis emasculata, and Phaeoura cristifera, (Pyrilidae), Hydropionia fenestralis, and Triozosneura dorsonotata, (Cossidae), Comadia redtenbacheri and C. albistriga. Same locality, Sept. 12-14; (Saturniidae), Agapema galbina, (Noctuidae), Acronica valliscola, Polia tuana, Lacinipolia spiculosa, Homorthodes discreta, Pseudocnemis striolata, Amphipyra pyramidoides, Palaperigea rotundipennis, Oxycnemis franclemonti, Antaplagla hachita, Schinia argentifascia, S. cumatilis, S. aleucis, Grotella dis, Aleptina junctimacula, Ianus mosca, and Erebus odora, (Notodontidae), Ursia furtiva, (Pericopidae), Daretis howardi, (Lasiocampidae), Dasychira mescalera, (Geometridae), Prorella albida, Glaucina mayelisaria, Eubarnesia ritaria, and Nepterota furva, (Pyrilidae), Terastia miculosalis, Pyrausta andrei, P. retidiscalis, P. klotsi, P. flavibrunnea, Fundella ignobilis, and Patricola semicana, (Tortricidae), Decodes mcswaini, (Acrolophidae), Acrolophus griseus griseus (New state record for this subspecies). Culbertson Co., Sierra Diablo Wildlife Management area, June 11-12; (Noctuidae), Euxoa simulata, E. xasta, E. terrealis, Oncocnemis figurata, Gloanna new species (in press), Canthylidia scutosa, Catocala verrilliana and C. frederici. Same locality, Sept. 15-16; (Saturniidae), Coloradia pandora, (Noctuidae), Euxoa luctuosa, E. reticincta, Schinia coercita, and S. sexplagiata, (Geometridae), Eupithecia woodgatata (new state record), (Pyrilidae), Pyrausta flavofascialis. Anderson Co., Gus Engeling Wildlife Management Area, April 25; (Noctuidae), Acronicta dactylina, Lacinipolia renigera, Pyrrhia umbra, Baileya doubledayi (Prob. new state record), (Geometridae), Exelis dicolus (new state record), Tacparia zalissaria, Apecasia extremaria, (Cosmopterigidae), Cosmopterix floridenella, and Stagmatophora sexnotella. Same locality, June 19; (Noctuidae), Exyra semicrocea, Calpe canadiensis, and Melanomma auricinctaria, (Tortricidae), Phaneta cruentana and Eucosma fritillana. Same location, August 14; (Saturniidae), Spingicampa bisecta, (Noctuidae), Acronicta extricata, Parapamea buffaloensis, Schinia crenilinea, Catocala muliercula, C. maestosa, C. lacrymosa and Lomanaltes eductalis, (Pyrilidae), Crocidophora tuberculalis, C. serratissimalis and Framinghamia helvalis. Kerr Co., Kerrville State Park, May 15; (Noctuidae), Septis cariosa and Homohadena kappa, (Geometridae), Eupithecia zygadeniata. Brazoria Co., Churchill, May 9; (Noctuidae), Catocala mira, C. texarkana, C. alabamiae, C. minuta, C. ilia, C. micronympha, C. amica (at bait), Zanclognatha atrilineella (at light), (Tortricidae), Sparganothis diluticostana. Same location, May 25; (Noctuidae), Catocala amestris (at bait). Hidalgo Co., Bentsen St. Pk., May 27; (Noctuidae), Elydna gulnare, Bendis fufius, (Cossidae), Givira theodori, G. arboloides and Hamilcara ramuscula. Harris Co., Lake Houston, Aug. 22; (Geometridae), Itame varadaria and Sterrhra scintillularia, (Pyrilidae), Diastictis pseodargyralis, and Crocidophora pustuliferalis, (Psychidae), Basi cladus traceyi. Cottle Co., Matador Wildlife Management Area, Oct. 8; (Noctuidae), Euxoa melana, E. niveilinea, E. cinereopallida, E. cicatricosa, Spartiniphaga inops, and Catocala prob. texanae, (Pyrilidae), Microcrambus croesus. Hemphill Co., Lake Marvin, Oct. 9; (Noctuidae), Onychagrotis rileyana, Graphiphora badinodis, Nephelodes miniana, Trichocerapoda strigata, T. arrosta, Papaipema nebris, and Meropleon titan. Cameron Co., South Padre Island, Oct. 24; (Noctuidae), Schinia hanga, Eoreuma loftini (confirmed by dissections, and Eoreuma new species (in press). Hidalgo Co., Santa Ana Refuge, Oct. 23; (Pyrilidae), Chorrera extrincica (Prob. new U. S. record). The following were collected in H. A. Freeman's yard at 1605 Lewis Drive, Garland, by the use of bait traps, MV and UV light and resting, from May 20 to Oct. 11: (Sphingidae), Amphion nessus. (Saturniidae), Automeris io. (Noctuidae), Zale lunata (common), Catocala maestosa (42 specimens), C. agrippina (48 specimens), C. lacrymosa (3 specimens), C. vidua (1 specimen), C. ilia (28 specimens), C. neogama loreta (1 specimen), C. epione (3 specimens), C. piatrix (19 specimens), C. ultronia (2 specimens), C. micronympha (1 specimen), C. alabamiae (1 specimen), and C. amica (1 specimen). The following species of Catocala were collected at Keeton Park, Dallas, June 23 to Sept. 28, all resting: C. innubens (1 specimen), C. agrippina (40 specimens), C. maestosa (50 specimens), C. vidua (1 specimen), C. neogama loreta (12 specimens), C. carissima (1 specimen), C. amatrrix (1 specimen), and C. amica (12 specimens). Jim and Jean Coleman found Agapema galbina galbina in Culbertson Co., 1 mi. S. of Sierra Blanca on Oct. 17, 1 mi. N. of junction of State Highway 54 and U.S. 62, S. of Guadalupe Nat'l Park, on Oct. 18-19 and at the U.S. 62 Rest Stop N. of McKittrick Canyon Rd on Oct. 19.



ZONE 5 EASTERN MIDWEST: MISSOURI to MINNESOTA to MICHIGAN to WEST VIRGINIA: Coordinator: M. C. Nielsen. Contributors: G. Balogh (GB), J. Bess (JB), C. Burkhart (CB), J. Calhoun (JC), T. Carr (TC), L. Ferge (LF), L. Gibson (LG), D. Hess (DH), R. Huber (RH), L. Koehn (LK), R. Leary (RL), V. Lucas (VL), E. Metzler (EM), M. Nielsen (MN), P. Opler (PO), J. Parkinson (JP), D. Parshall (DP), D. Schlicht (DS), J. Shuey (JS), E. Shull (ES), R. Stanford (RS). Other collectors cited: G. Belyea (B), W. Bergman (WB), C. Covell (CC), L. Crabo (LC), R. Dana (RD), R. Henderson (H), H. King (HK), C. Lundeen (CL), J. Perona (P), Y. Sedman (YS), W. Taft (WT). **GENERAL COMMENTS:** Fewer collectors responded and reported many butterfly species down from previous years, even though 160 species were recorded for the zone. Most experienced poorer weather conditions in many areas, especially in northern sections. Many found L. bachmanii, E. phaeton and F. tarquinius in large numbers in most areas; Catocala populations down, especially in northern counties. Collectors continue to show an interest in reporting on moths, especially the Noctuidae. There were no significant migrations of southern species into northern areas; no reports of D. plexippus migrations were reported. All new county records are capitalized.

MISSOURI Balogh reported that many species decreased in numbers, including spring emerging butterflies, Papaipema, Schinia and Catocala. The following butterflies increased in numbers vs. the past two seasons: E. phaeton ozarkae, C. nycteis and L. bachmanii.

CHOICE BUTTERFLIES (all GB): A. cellus, 16 May, St. Louis Co.; L. accius, 14 Aug., Mississippi Co.; H. leonardus, 6 Sept., H. metea, 2 May, Jefferson Co.; W. otho, 5 June, Barry Co.; P. byssus, 5 June-3 July, Barry Co., Howell Co.; E. dukesi, 4 July, Stoddard Co. (1 worn), 22 Aug., St. Charles Co. (common-fresh); A. hegon, 18 April-2 May, Franklin Co.,

St. Francois Co.; A. aesculapius, 14 Aug., Mississippi Co.; A. belli, 5 June, Barry Co.; A. hianna, 2-16 May, Jefferson Co.; St. Louis Co.; E. olympia, 1-8 May, St. Francois Co., St. Louis Co.; F. tarquinius, 9 May, Lincoln Co.; S. edwardsii, 3 July, Howell Co. (common); C. cecrops, 8 May-5 June, Barry Co., Jefferson Co., St. Francois Co., 3 Sept., Jefferson Co. (at UV); G. lygdamus, 11-18 April, Franklin Co., St. Louis Co.; C. muticum, 21-29 Aug., St. Francois Co.; E. phaeton ozarkae, 6 June, Franklin Co. (common); E. creola, 14 Aug., Mississippi Co.

CHOICE MOTHS (GB): S. franckii, 14 Aug., Mississippi Co.; A. delecta, 4 July, Stoddard Co.; C. canadensis, 3-11 Sept., Jefferson Co., St. Francois Co.; S. ultima, S. dama, 14 Aug., Mississippi Co.; E. cocoata, 24 June, Jefferson Co.; G. furciferata 5-10 July, Cape Girardeau Co., St. Francois Co.; I. abruptata, 15 May, Jefferson Co.; I. larvaria, 5 July-15 Aug., Cape Girardeau Co.; X. sospeta, 7 Aug., Jefferson Co.; X. attenuaria, 3 July-15 Aug., Cape Girardeau Co., Mississippi Co., Stoddard Co.; I. basalis, 5 June, Barry Co.; (SESTIIDAE-det. T. Eichlin-all attracted to Conrel synthetic lures) C. anthracipennis, 6 Sept., Jefferson Co.; E. emphyiformis, 2-8 May, Jefferson Co., St. Francois Co. (common); P. simulans, 24 May-10 July, St. Louis Co.

FOODPLANT RECORDS (GB): E. phaeton ozarkae, St. Francois Co., ex-larvae on Pedicularis canadensis, pupated 2 May, eclosed 15-17 May, St. Francois Co., ex-larvae on Gerardia flava, pupated 8 May, eclosed May, 1982; C. cardui, ex-larvae on Cirsium altissimum, pupated 15 May, eclosed 29 May; P. joanae, St. Francois Co., 1 female reared, ex last instar on Zizia aurea, pupated 22 May, eclosed 3 June; P. gaurae, St. Francois Co., ex-larvae on Gaura biennis, pupated 21 Aug., eclosed indoors 27 Sept.-4 Oct. (one live pupa overwintering); P. juanita, St. Francois Co., ex-larvae on G. biennis, pupated 21 Aug., 1 eclosed indoors 3 Oct., others overwintering; E. imperialis, St. Francois Co., larvae on Acer saccharum, pupated 19 Sept.

KENTUCKY. Koehn and Lucas reported on a good season with butterflies from widely scattered counties. Gibson found Catocala populations down again but recorded several choice Noctuidae. Several joined the fall field trip of The Society of Kentucky Lepidopterists at Henderson Sloughs recording 44 species of butterflies and several unusual moths.

CHOICE BUTTERFLIES: A. cellus, 2 May, Menifee Co. (LK); A. lyciades 10 Sept., GRAVES CO. (VL); E. horatius, 11 Sept., Henderson Co. (RS); E. baptisiae, 18 April, McCREARY CO., 20 Sept., Boone Co. (VL); H. metea, 18 April, McCreary Co. (JC,LK,VL); H. leonardus, 12 Sept., Meade Co. (LK,VL); P. yehi, 11-12 Sept., HENDERSON CO. (LK,VL,RS); E. dion, 10-11 Sept., Graves Co., Henderson Co. (LK,VL,RS); A. hegon, 18 April, McCREARY CO. (LK,VL); P. ocola, 10 Sept., Fulton Co. (LK); A. virginianus, 15 April-2 May, Harlan Co., McCreary Co., Menifee Co. (LK,VL); F. midea, 18 April, McCREARY CO. (VL); Z. cesonia, 11 Sept., HENDERSON CO. (LK,VL,RS); H. hyllus, 11-21 Sept., Boone Co., Henderson Co. (LK,VL); S. liparops strigosum, 3 July, Harlan Co. (LK); I. augustus croesoides, 16 April-2 May, McCreary Co., Menifee Co. (LK,VL); I. nippon nippon, 16-18 April, Harlan Co., McCREARY CO. (LK,VL); P. m-album, 16 April, Harlan Co. (LK); E. laeta, 3 July, Harlan Co. (LK); C. ebenina, 15 April-2 May, Harlan Co., Menifee Co. (LK,VL); G. lygdamus lygdamus, 15 April-2 May, Harlan Co., Menifee Co. (LK,VL); L. bachmanii, 3 July-12 Sept., Fulton Co., Harlan Co., Meade Co. (LK,VL); S. diana, 3 July, Harlan Co. (LK); C. bellona, 16 April, Menifee Co. (VL); A. andria, 18 April, McCreary Co. (LK,VL); E. portlandia missarkae, E. creola, 10 Sept., Fulton Co. (LK); S. appalachia appalachia, 10-12 Sept., Fulton Co., Henderson Co., Meade Co. (LK,VL,RS); C. gemma, 15 April-2 May, Menifee Co. (LK).

CHOICE MOTHS: D. inscripta, 16-17 April, McCreary Co., Whitley Co. (VL); A. luna, 16 April, Menifee Co. (early record-freshly emer. female-VL); A. venerabilis, A. dilucida, A. bollii, O. illocata, Oct., eastern Ky (LG); P. baptisiae, 10-11 Sept., Henderson Co. (LG); P. buffaloensis, 11-12 Sept., Henderson Co. (CC); C. piatrix, 11 Sept., Henderson Co. (VL); P. zallisaria, 10-11 Sept., Henderson Co. (H).

STATE RECORD: Simyra henrici, 10-11 Sept., Henderson Co. (H).

WEST VIRGINIA. Opler found the season delayed about 10 days by a very cold spring, but reported the following good finds on 24-25 April: A. virginianus, E. olympia, M. gryneus and a returning D. plexippus in Harvey Co., and C. ebenina (1 ♀) in Greenbrier Co. Then on 5 July, he found E. baptisiae, P. hobomok (worn), E. lisa and a strongly suffused melanic S. aphrodite; the 2nd brood of P. tharos was beginning to emerge, while P. pascoensis was still common. Shuey recorded A. virginianus, E. ebenina, G. lygdamus and H. sosybius on 9 May, Kanawha Co. Carr collected M. jasminearum, L. coniferarum and D. versicolor on 17 July, Boone Co.

OHIO. Six collectors responded giving the state good coverage. Lucas reported the winter as one of the severest on record for NE Ohio; record snowfall reached 105+ inches, with over 13 inches of snow falling in April! Temperatures indicated an all-time low of -17° on 17 Jan. He found some spring emergents were up in Cuyahoga Co., i.e. E. juvenalis and P. zabulon, and E. phaeton and C. harrisii liggetti up in Portage Co. There was a lack of fall migratory species despite above normal temperatures extending into December. Shuey found species diversity high in the spring, but numbers low and collecting poor after June. Calhoun, collecting in central Ohio, saw an unusually warm dry spring progressing into a hot, dry summer with below normal temperatures in late summer. Many species appeared early; E. anhedon was flying with F. midea in May in SE Ohio. Migrants were low while F. tarquinius was up in numbers. Metzler reports that C. hageni is doing well in Ohio in spite of its rarity elsewhere E. of the Mississippi River.

CHOICE BUTTERFLIES: A. lyciades, 26 June, Cuyahoga Co. (VL); E. icelus, 15 May-21 July, LOGAN CO. (rare partial 2nd brd.-JC,DP); E. baptisiae, 15 May, LOGAN CO. (JC); P. centaureae wyandot, 4-29 May, ATHENS CO., Vinton Co. (JC,JS); N. lherminier, 21-26 Aug., VINTON CO. (proof of 2nd brd-DP); T. lineola, 6 June-8 July, Cuyahoga Co., Lake Co., Portage Co., WYANDOT CO. (VL,DP); H. leonardus, 22 Aug-5 Sept., Lucas Co., Vinton Co. (TC,DP); H. sassacus, 6-10 June, Lake Co., Portage Co. (VL); P. mystic, 6-11 June, Lake Co., Licking Co., Portage Co., UNION CO. (JC,VL); A. campestris, 2 Aug., LAWRENCE CO. (JC); A. logan, 6-24 July, LOGAN CO., UNION CO., WYANDOT CO. (DP); P. zabulon, 18 May, Meigs Co. (VL); P. massasoit, 5 July, Williams Co. (JS); E. dion, 10 July-10 Aug., LOGAN CO., MARION CO., MORROW CO., Portage Co., Union Co. (LK,VL,DP); E. dukesi, 17 July-9 Aug., LOGAN CO., Union Co., WYANDOT CO. (VL,DP); E. conspicua, 16-30 July, MORROW CO., Portage Co. (VL,DP); A. hegon, 9-18 May, HIGHLAND CO., MEIGS CO. (JC); H. cresphontes, 20 July-9 Aug., HANCOCK CO., HARDIN CO., LOGAN CO., Union Co., WYANDOT CO. (DP); P. protodice, 26 Aug., VINTON CO. (DP); F. midea, 2-18 May, Highland Co. Meigs Co. (VL); F. tarquinius, 1 May-16 Aug., DELAWARE CO., Highland Co., Lucas Co., UNION CO. (JC,TC,LK,VL); H. hyllus, 27 June-27 July, Lucas Co., Portage Co. (LK,VL); E. helloides, 27 July, Lucas Co. (VL); S. liparops strigosum, 27 June-10 Aug., Franklin Co., LOGAN CO., Paulding Co., Portage Co. (TC,LK,VL,DP); C. cecrops, 17 May-26 Aug., Athens Co., Vinton Co. (VL,DP); M. gryneus, 1-2 May, Highland Co. (LK,VL); I. henrici, nippon, 3-5 May, Athens Co. (JS); P. m-album, 17 May, Athens Co. (JC); C. neglecta major, 17 May, Vinton Co. (VL), C. ebenina, 1 May, Highland Co. (LK); C. borealis, 28 June, Athens Co. (JS); L. bachmanii, 8-21 Sept., Hamilton Co., WYANDOT CO. (VL,DP); E. claudia, 16 Sept., UNION CO. (JC); C. harrisii liggetti, 6 June, Portage Co. (VL); C. nycteis, 11 July, Lucas Co. (2nd Co. record-TC); E. anhedon, 18 May-9 Aug., HANCOCK CO., LOGAN CO., Meigs Co., MORROW CO. (VL,DP); S. eurydice, 27 June-27 July, Lucas Co., Portage Co., TRUMBULL CO. (JC,VL); C. gemma, 17 May, Athens Co., worn (VL); H. sosybius, 26 May-22 Aug., ATHENS CO., VINTON CO. (DP,JS).

CHOICE MOTHS: *M. jasminearum*, 12 July, Athens Co. (VL); *C. catalpae*, 12-20 May, Lucas Co. (TC); *C. hageni*, 10 Sept., Clermont Co. (EM); *D. hylaeus*, *P. plebeja*, 27 July, Lucas Co. (TC); *S. eremitus*, 24-26 July, Lucas Co. (TC,VL); *D. versicolor*, 3 July, Portage Co. (VL); *C. angulifera*, 1 June-12 July, Athens Co., Lucas Co. (TC,VL); *H. maia*, 3-18 Oct., Lucas Co. (TC), Vinton Co., nr. ab. *lintneri* (VL); *A. virginianensis*, 7-12 July, Athens Co., Lucas Co. (TC,VL); *S. bicolor*, 13 May, Lucas Co. (L. Simon); *C. regalis*, 12 July, Athens Co. (VL); *E. imperialis*, 5-26 July, Lucas Co. (TC,VL); *H. confusa*, 11 July, Portage Co. (JS); *A. chionanthi*, *P. nelita*, 4 Sept., Vinton Co. (MN); *C. piatrix*, 12 Sept., Lucas Co. (TC); *C. relicta*, 4 Sept., Vinton Co. (MN); *C. meskei*, 26 July-17 Aug., Lucas Co. (TC,VL); *C. coccinata*, 5-27 July, Lucas Co. (TC,VL); *C. praeclara*, *connubialis*, 26-27 July, Lucas Co., det. by T. Carr (VL); *D. perspicua*, *H. scripta*, 26 July, Lucas Co. (VL); *T. albivittata*, 17 May, Athens Co., 10 Aug., Cuyahoga Co. (VL); *P. scapha*, *L. biguttata*, *H. americana*, 26 July, Lucas Co. (VL); *A. aurea*, *D. funeralis*, 17 May, Athens Co. (VL).

STATE RECORDS: *C. ethlius*, 26 Aug., VINTON CO. (DP); *S. privata*, larvae collected 6 June on *Rubus* sp., emerg. 12 Aug., PORTAGE CO. (EM); *T. artesta*, 19 Aug., ERIC CO., 2 fresh (EM).

INDIANA. The state experienced one of the coldest winters, wettest springs and driest summers in recorded history! Shall reported collecting 78 butterfly and 285 moth species-most butterflies were down or absent.

CHOICE BUTTERFLIES: (ES except as noted): *P. origenes*, 5 June, Wabash Co.; *W. egeremet*, 29 June, Wabash Co.; *P. verna*, 18 June, Union Co.; *P. zabulon*, 24 Aug., Wabash Co. (DE); *E. conspicua*, 2 Aug., LaGrange Co. (DE); *H. cresphontes*, 25 May, Kosciusko Co.; *G. marcellus*, 9 July-11 Sept., Elkhart Co. (CB,DE); *A. napi oleracea*, 24 June-3 Aug., LaGrange Co. (DE,ES); *E. lisa*, 2 Aug., LaGrange Co. (DE); *F. farquinius*, 8 July-24 Aug., Elkhart Co., Wabash Co. (CB,DE); *H. hyllus*, *E. dorcas*, 2-3 Aug., LaGrange Co. (DE); *C. cecrops*, 18 Aug., Union Co.; *M. gryneus*, 18 June-12 July, Union Co.; *L. bachmanii*, 18 June, Union Co.; *E. phaeton* 5 July, Steuben Co. (TC); *P. progne*, 9 July-18 Oct., Albion Co., Elkhart Co., Wabash Co. (CB,ES); *J. coenia*, 12 July, Marion Co.; *A. celtis*, 9 July, Elhart Co. (CB); *E. anthedon*, 12 June, Delaware Co.; *S. eurydice*, 5 July-12 Sept. (late date), Steuben Co., Wabash Co. (TC,DE).

CHOICE MOTHS: (ES except as noted): *M. sexta*, 18 Aug., Brown Co.; *C. juglandis*, 11 July, Union Co.; *E. pandorus*, 6 Aug., Brown Co. (DE); *C. angulifera*, July, Brown Co. (DE,ES); *C. regalis*, *E. imperialis*, 29 July, Wabash Co.; *E. deflorata*, 3 July, Union Co.; *O. garmani*, 25 April, Wabash Co. (DE); *S. walkeri*, 13 Mar., Kosciusko Co. (in maple syrup sap buckets!); *S. onargus*, *A. urentis*, 18 June, Union Co.; *E. decliva*, 16 Oct., Wabash Co.; *P. furcata*, *cataphracta*, *cerussata*, 16 Oct., Wabash Co.; *C. piatrix*, *minuta*, 16-19 July, Brown Co.; *P. perspicua*, *H. biundata*, 17 Aug., Brown Co.; *D. obliquata*, 17 Aug., Brown Co.; *N. albivittata*, 30 July, Wabash Co.; *P. titea*, *X. sospeta*, *E. obtusaria*, *E. amoenaria*, 16-19 Aug., Brown Co.; *A. quadrata*, 18 July, Union Co.; *A. humerosana*, 17 Aug., Brown Co.; *E. alisellana*, 1 July, Kosciusko Co.

ILLINOIS. Winter was very cold with warm spells in late Feb. and late Mar. April was very cold and snowy, followed by warmer temperatures into mid-May. Summer was extremely wet and stormy and fall temperatures were above normal with heavy rains. In general, Hess found the season poorer than in the past; he and Sedman continued prairie ecology studies in cooperation with other lepidopterists. Hess found the following butterflies up in numbers: *E. brizo*, *P. zabulon*, *L. bachmanii*, *A. andria* (spring), *S. idalia* and Satyridae; and down in numbers were: *A. logan*, Papilionidae, *Eurema*, *P. sennae eubule*, *C. cesonia*, *S. cybele*, *C. bellona*.

CHOICE BUTTERFLIES: *S. hayhurstii*, 29 May-16 June, Hancock Co., Mason Co. (DH,YS); *E. martialis*, 25 July, Mason Co. (YS); *H. phylaeus*, 30 Sept.-18 Oct., McDonough Co. (DH,YS); *H. ottoe* ssp., 20 June-25 July, Mason Co. (GB,YS); *H. leonardus-pawnee*, 3 Sept., McDonough Co. (DH); *P. verna*, 27 June, Hancock Co. (YS); *A. arogos*, 25 July, Mason Co. (YS); *P. byssus*, late June-25 July, Hancock Co., Tazewell Co. (YS); *P. zabulon*, 19 May-17 June, 4 Sept., Cass Co., Hancock Co., Mason Co., McDonough Co. (DH,YS); *A. hianna*, 8-19 May, Mason Co., PIKE CO., on sand and loess hill prairies (DH,YS); *E. olympia*, 8 May, Mason Co. (YS); *Z. cesonia*, 4 Sept., Cass Co., Mason Co. (DH,YS); *P. sennae eubule*, 4 Sept., Mason Co., Pike Co. (DH,YS); *N. iole*, 30 Sept.-1 Oct., Mason Co., McDonough Co. (DH); *G. xanthoides dione*, 23-29 June, Hancock Co. (YS); *M. gryneus*, 8-9 May, McDonough Co. PIKE CO., 100's nectaring on flowering dogwood among cedars on hill prairie (DH,YS); *L. bachmanii*, 21 Aug.-4 Sept., Cass Co., Brown Co., Mason Co., McDonough Co., Tazewell Co. (DH,YS); *S. idalia*, 4 June-4 Sept., Cass Co., Mason Co. (GB,DH,YS); *C. bellona*, 8 May-4 Sept., Cass Co., Hancock Co., Mason Co., McDonough Co. (DH,YS); *P. progne*, 16 June-16 Oct., Hancock Co., McDonough Co. (DH,YS); *A. andria*, 1-19 May, Mason Co., McDonough Co., Pike Co. (DH,YS); *E. anthedon*, 29 Aug.-4 Sept., BROWN CO., CASS CO., McDonough Co. (DH,YS).

FOODPLANT RECORDS: *E. marialis*, 19 June, larva rolled in *Ceanothus americanus* leaf, eclosed 9 July, Mason Co. (GB); *P. glaucus*, 16 May, melanic female ovipositing on cultivated plum, McDonough Co. (DH); *C. catalpae*, 26 Aug., many larvae on Catalpa, McDonough Co. (DH).

IOWA. Schlicht, in a brief note, reported collecting *E. conspicua*, 25 July, Buchanan Co., *F. tarquinius*, 12 Aug., Jones Co., and *M. gryneus*, 25 July, Buchanan Co. (COME ON YOU "HAWKEYES"!!)

MINNESOTA. Huber had a fantastic season planning field trips around a list, compiled on a month-species basis, of 67 priority butterfly species. He and 3 other collectors recorded a minimum of 51 new butterfly county records for their priority elements.

CHOICE BUTTERFLIES: *E. brizo*, 22 May, CROW WING CO., MORRISON CO., TODD CO. (LC,RH); *E. lucilius*, 22 May-10 Aug., CROW WING CO., ROSEAU CO. (LC,CL); *O. powesheik*, 10 July, DODGE CO., SE--most record by over 100 mi. (LC,RH); *H. comma assiniboia*, 9 Aug., KITTSON CO. (CL); *H. comma laurentina*, 10 Aug., ROSEAU CO. (CL); *H. ottoe*, 24 July, JACKSON CO., REDWOOD CO. (LC); *H. leonardus leonardus*, 10 Aug., ROSEAU CO. (CL); *H. l. fm. stallingsi*, 21 Aug., FILLMORE CO., HOUSTON CO. (CL); *H. dacotae*, 1-17 July, MURRAY CO. (LC,RD,CL); *A. arogos*, 17 July, LYON CO., MURRAY CO., NOBLES CO. (LC,RH,CL); *E. conspicua*, 10-24 July, DODGE CO., REDWOOD CO., W-most record (RH,CL); *E. bimacula*, 10 July, DODGE CO. (LC,RH,CL); *P. napi oleracea*, 19-22 May, ANOKA CO., TODD CO. (LC,RH,CL); *M. gryneus*, 15 May-24 July, REDWOOD CO., farther W than last year (LC); *I. polios*, 22 May-5 June, CROW WING CO., ITASCA CO., KOOCHICHING CO., PINE CO. (RH,CL); *I. henrici*, 22 May, CROW WING CO. (CL); *E. amyntula*, 22 May, CROW WING CO., MORRISON CO. (LC); *C. frigga* ssp., *freijsa* ssp., 5 June, PINE CO. (LC,RH); *C. titania grandis*, 10 Aug.-4 Sept., ROSEAU CO. (W-most), PINE CO. (S-most) (RH,CL); *E. disa mancinus*, 13 June, ST LOUIS CO. (LC); *O. macounii*, 17-19 June, Lake Co. (WB).

WISCONSIN. Ferge filed a detailed report; he initiated the collecting season on 15 April, a good week later than usual, following a severely cold winter (-25 degrees in Jan.). Emergence of later spring species was about normal by mid-May. Population levels of most butterflies were the lowest in memory, especially in northern counties, where *Polygonia* and *Nymphalis* continued to bottom-out. *B. arthemis* was conspicuously absent; moth populations remained near normal with good collecting in SW part of state. *Catocala* were quite scarce northward, but picked up in southern counties. No southern migrant butterflies were observed, though a few southern moth species were recorded from Grant

Co. Cool fall weather curtailed late collecting - no significant catches were made in southern areas after 30 Sept. Parkinson found butterflies down except for elfins; baiting for moths was again fruitless in Florence Co.

CHOICE BUTTERFLIES: *E. lucilius*, 11 July-4 Sept., Grant Co., Waukesha Co. (RL,JP); *E. persius*, 15-24 May, Adams Co., Juneau Co. (RL,JP); *C. palaemon mandan*, 26 May, Waupaca Co. (RL); *T. lineola*, 22 June, Fond DuLac Co. (RL); *H. comma laurentina*, 28 Aug., Marinette Co. (JP); *H. ottoe*, 9-31 July, Grant Co., Green Co. (GB,LF,JP); *H. leonardus*, 28 Aug.-4 Sept., Florence Co., Green Co., Marinette Co. (JP); *H. metea*, 15-24 May, Adams Co., Florence Co. Juneau Co., Marinette Co. (RL,JP); *H. sassacus*, 15-22 May, Florence Co. (JP); *P. origenes*, 11 July, Grant Co. (JP); *P. verna*, *P. byssus*, *E. dion*, 11 July, Grant Co. (LF,JP); *E. conspicua*, 28 July, Waukesha Co. (RL); *A. hianna*, 24 May, Adams Co. (RL); *A. hegon*, 23 May-6 June, Florence Co., Forest Co., Langlade Co. (RL,JP); *A. vialis*, 22 May-6 June, Adams Co., Forest Co., Marinette Co. (RL,JP); *G. xanthoides dione*, 11 July, Grant Co. (JP); *M. gryneus*, 31 July, Green Co. (GB,LF); *I. irus*, 15 May, Adams Co. (LF,JP); *P. saepiolus*, 26 June, Bayfield Co. (JP); *L. argyrognomon nabokovi*, 2-4 July, Florence Co. (B,MN,JP); *G. lygdamus couperi*, 10-15 May, Adams Co., Winnebago Co. (RL,JP); *C. muticum*, 17 July, Washington Co. (LF); *S. idalia*, 4 Sept., Green Co. (JP); *C. frigga* ssp., 4-5 June, BAYFIELD CO., Oneida Co. (LF); *C. freija* ssp., 23 May, LINCOLN CO. (LF); *C. gorgone carlota*, 15-24 May, Adams Co. (RL,JP); *P. batesii*, 12 June, Oneida Co. (LF); *C. inornata inornata*, 6 June, Ashland Co., Bayfield Co., Iron Co. (JP); *E. discoidalis*, 22 May, Forest Co. (LF,JP); *O. chryxus strigulosa*, 16-22 May, Florence Co., Marinette Co. (JP); *O. jutta ascerta*, 30 May, Langlade Co. (RL).

CHOICE MOTHS: *M. sexta*, 13,14 Sept., GRANT CO. (LF,JP); *S. eremitus*, 31 July, FLORENCE CO. (JP); *S. drupiferarum*, 30 May-6 June, Florence Co. (JP); *E. pandorus*, 18 July, TREMPEALEAU CO. (LF); *D. inscripta*, 10 May, GRANT CO. (LF); *H. columbia*, 5-28 June, FOREST CO., Oneida Co., attached to ♀ *cecropia* (LF,JP); *A. luna*, *A. polyphemus*, 10 May, 9 July, Grant Co., definitely 2 broods (LF); *H. maia*, 23 Sept., Douglas Co., just emerged (LF); *A. figurata*, 10 May, Grant Co. (LF); *A. celia*, 15 May, ADAMS CO. (JP); *A. caia americana*, 31 July, Florence Co. (JP); *H. parthenos*, 2 July, Oneida Co. (LF); *A. rubricoma*, 15 May, Grant Co. (LF); *A. funeralis*, 15 May-18 July, Grant Co., Trempealeau Co. (LF); *M. fishii*, 30 April-1 May, FLORENCE CO., Marinette Co. (LF,JP); *A. oblata*, 2 July VILAS CO. (JP); *P. rugosa*, 6 June, FLORENCE CO. (JP); *L. rubripennis*, 2-7 Aug., Grant Co. (JP), Green Co., UV on dry prairie (LF); *B. borealis*, 24-30 April, BURNETT CO., FLORENCE CO., Oneida Co., WASHBURN CO. (LF,JP); *F. jocosus*, 24 April, BURNETT CO., FLORENCE CO. (LF,JP); *F. major*, 24 April-12 May, Burnett Co., Florence Co. (LF,JP); *F. comstocki* 3-22 May, Florence Co., Marinette Co. (LF,JP); *C. styracis*, 24 April, BURNETT CO., WASHBURN CO. (LF); *L. semiusta*, 24 April-14 May, 28 Sept., BURNETT CO., Florence Co., GREEN CO., ONEIDA CO., WASHBURN CO. (LF,JP); *L. amanda*, 30 Sept.-11 Oct., FLORENCE CO. (JP); *L. disposita*, 25 April, FLORENCE CO. (JP); *L. baileyi*, 23-24 April, BURNETT CO., Oneida Co. WASHBURN CO. (LF); *L. thaxteri*, 24 April-23 May, Florence Co., Oneida Co. (LF,JP); *X. thoracica*, 24-25 April, Florence Co. (JP); *X. acadica*, 3-23 Sept., Douglas Co., Marathon Co., Price Co. (LF); *P. carnosa*, *C. sericea*, 23 Sept., Douglas Co. (LF); *J. rufago*, 24 April, BURNETT CO. (LF); *H. hircina*, 23 April-23 May, Florence Co., Oneida Co. (LF,JP); *M. orbifera*, 27 Sept., Florence Co. (JP); *H. stramentosa*, 13 Sept.-3 Oct., *P. cerina*, 13 Sept., Grant Co. (LF); *P. furcata*, 13-28 Sept., FLORENCE CO., Grant Co. (LF,JP); *P. leucostigma*, 30 Sept., Grant Co. (LF); *H. borealis*, 11-15 May, ADAMS CO., nectaring on blueberry (LF,JP); *S. lucens*, 11-18 July, Grant Co., TREMPEALEAU CO., on *A. canescens* flowers and at UV in dry prairie (LF); *S. jaguarina*, 18 July, Trempealeau Co., at UV (LF); *S. microgamma nearctica*, 27 June-2 July, Florence Co., Marinette Co., Vilas Co. (JP); *A. aerea*, 30 May, Green Co. (LF); *E. thyatyroides*, 9 July, Grant Co. (LF); *A. bimaculata*, 6 Aug., Bayfield Co. (LF); *C. briseis*, 31 July-6 Aug., BAYFIELD CO., Forest Co., nectaring on fireweed & in bait trap (LF,JP); *C. abbreviatella*, 10-30 July, Grant Co. GREEN CO., at UV (LF,JP); *C. whitneyi*, 30 July, GREEN CO., at UV (LF); *C. amestris*, 10 July, Grant Co., at UV (LF); *C. clintoni*, 23 June-18 July, GRANT CO., GREEN CO., Trempealeau Co., at UV (LF,JP); *C. micronympha*, 30 July, GREEN CO. (LF); *M. texana*, 15 May, Grant Co., early date, possible breeding? (LF); *S. lunilinea*, 9 July, Grant Co. (LF); *S. liburna*, 9-10 July, Grant Co. (LF); *G. lintneri*, 22 April, GRANT CO. (LF); *H. subrotata*, 15 May-17 July, Grant Co. (LF); *H. rileyana*, 15 May, GRANT CO. (LF); *C. anthracipennis*, 31 July, Green Co., common at Conrel lure on prairies (GB).

FOODPLANT RECORD: *B. borealis* larvae accepted *Quercus alba* in captivity (LF).

STATE RECORDS: *S. bicolor*, 10 May, 10-7 Aug., GRANT CO., at UV (LF,JP); *P. beerinana*, 30 Sept., GRANT CO., at UV on dry prairie, det. M. Nielsen (LF); *P. bistrigata*, 15 May, GRANT CO., at UV (LF).

MICHIGAN. Fewer collectors responded, reflecting a downturn in species and numbers during the season. Despite one of the coldest winters of recent memory, and record snowfall, the season started only slightly later than normal. In general, populations of most butterflies and many moths were down from previous seasons. Especially down were many of the Hesperidae, Lycaenidae, *Lithophane*, *Papaipema* and *Catocala*. Nielsen recorded only 75 species of butterflies and 25 *Catocala* species. Bess, reporting from widely separated counties, recorded several moth species new to the Jackson Co. area; he found *C. neogama* extremely common at UV. Nielsen and 3 others enjoyed 6 days of fine collecting weather on Isle Royale N.P., recording 31 species of butterflies (4 species new to the island) and many moths during 26 June-2 July.

CHOICE BUTTERFLIES: *E. lucilius*, 26 June, ISLE ROYALE (MN); *E. persius*, 15 May, Montcalm Co. (MN); *C. palaemon mandan*, 28-30 June, Isle Royale (MN); *O. powesheik*, 12 July, Jackson Co. (JC); *H. leonardus*, 28 Aug., Dickinson Co. (JP); *P. viator*, massasoit, *E. dion*, 5-8 July, Cass Co. (CB); *E. conspicua*, 10 July, Jackson Co. (VL); *A. vialis*, 26 June-1 July, Isle Royale (B,MN); *A. virginianensis*, 7-23 May, HOUGHTON CO., Osceola Co. (JB,MN); *E. ausonides mayi*, 26-28 June, Isle Royale (HK,MN); *E. olympia*, 13 May, Allegan Co. (JB); *E. dorcas*, 10 July, Jackson Co., (VL); *E. helloides*, 8 Aug., Otsego Co. (LG,MN); *F. tarquinius*, 7 Aug., Otsego Co. (MN); *S. liparops strigosum*, 10 July, Jackson Co. (VL); *I. polios*, 23-25 May, Delta Co., Iron Co., Schoolcraft Co. (JB,MN); *I. irus*, 13-15 May, Allegan Co., Montcalm Co. (JB,MN); *I. eryphon*, 24 May, HOUGHTON CO. (JB,MN); *E. amyntula*, 29 June, ISLE ROYALE (MN); *L. argyrognomon nabokovi*, 29 June, ISLE ROYALE (MN); *L. melissa samuelis*, 13 May, 10 July-2 Aug., Allegan Co., Monroe Co. (JB,VL); *P. saepiolus*, 26 June-2 July, Isle Royale (B,MN); *C. muticum*, 10 July, Jackson Co. (VL); *P. eunomia dawsoni*, 25 June, KEWEENAW CO. (P); *C. freija* ssp., 22-26 May, Dickinson Co. (JB,MN,JP); *P. batesii*, 28 June-1 July, Isle Royale (MN); *E. anhedon*, 2 July, Isle Royale (HK); *N. mitchellii*, 5-10 July, Cass Co., Jackson Co. (JB,CB,TC,VL); *E. discoidalis*, 22-26 May, Dickinson Co. (JB,MN,JP); *O. chryxus strigulosus*, 23-25 May, Baraga Co., Delta Co., Dickinson Co., Iron Co. (JB,MN); *O. jutta ascerta*, 25 May, Dickinson Co. (MN).

CHOICE MOTHS: *D. hylaeus*, 7 Aug., OTSEGO CO. (MN); *S. canadensis*, 16 July, Clinton Co. (MN); *S. kalmiae*, 28 June, ISLE ROYALE (MN); *S. poecila*, 21 May-5 June, Dickinson Co., Otsego Co., Roscommon Co. (JB,JP); *T. polyphemus*, 28 June, ISLE ROYALE (MN); *B. borealis*, 25 April-6 May, Dickinson Co., Otsego Co. (MN,JP); *F. major*, 30 April-6 May, Otsego Co. (MN); *F. comstocki*, 6-12 May, DICKINSON CO. OSCEOLA CO. (JB,JP); *L. amanda*, 7 Oct., DICKINSON CO. (JP); *L. thaxteri*, 24-29 April, DICKINSON CO., Otsego Co. (MN,JP); *X. nupera*, 29 April, 30 Sept., DICKINSON CO., JACKSON CO., (JB,JP); *L. digitalis*, 28 Sept., DICKINSON CO. (JP); *O. alurina*, 13-23 April, JACKSON CO. (JB); *E. depilis grandis*, 18 April-7 May, JACKSON CO. (JB); *O. minuscula*, 7 Aug., Otsego Co., at UV, bog (MN); *H. stramentosa*, 14-30 Sept., DICKINSON CO. (JP); *P.*

baptisiae, 1-13 Sept., JACKSON CO. (JB); *P. nepheleptena*, 25 Sept., CASS CO. (MN); *P. circumlucens*, 21 Aug., Lenawee Co., in bait trap (MN); *P. leucostigma*, 11 Sept., DICKINSON CO. (WT); *P. limpida*, 25 Sept., CASS CO. (MN); *P. ridgida*, 23-26 Aug., JACKSON CO. (JB); *A. densa*, 2 Aug., JACKSON CO. (JB); *M. orbifera*, 28 Sept., DICKINSON CO. (JP); *C. coelebs*, 31 July-7 Aug., Cheboygan Co., Otsego Co. (MN); *C. subnata*, 19 Aug.-14 Sept., Jackson Co., Lenawee Co. (JB, MN); *E. pudens*, 23 April-9 May, JACKSON CO., (JB); *L. brephoides*, 30 April, MONTMORENCY CO. (MN); *E. substriataria*, 29-30 April, Otsego Co. (MN).

FOODPLANT RECORDS: *E. lucilius*, 30 June, larva on Columbine, Isle Royale (MN); *E. olympia*, 13 May, ova on *Arabis lyrata* and *drummondii*, Allegan Co. (JB); *E. austonides mayi*, 26 June-2 July, numerous larvae on *A. drummondii*, Isle Royale (MN); *H. lineata*, 12-13 Sept., larvae on *Oenothera biennis*, Jackson Co., Lenawee Co., Monroe Co. (JB); *H. trisignata*, 23 July, Jackson Co., larvae on *Ilex verticillata* (JB); *P. harrisi*, 2 June-8 July, larvae in *Angelica* and *Heracleum*, Cass Co., Jackson Co., St. Joseph Co. (JB); *P. cataphracta*, 1-10 Aug., larvae in *Helianthus tuberosa* and *gigantea*, Jackson Co. (JB); *P. cerussata*, 30 July, larva in *Cacalia tuberosa* and *E. maculatum*, Berrien Co. (MN); *P. eupatori*, 30 July, larva in *E. maculatum*, Berrien Co. (MN).

PREDATOR RECORD: *P. massasoit*, 12 July, preyed-upon by crab spider, *Misumena* sp., Jackson Co. (JC).



ZONE 6 SOUTH: ARKANSAS, LOUISIANA, TENNESSEE, MISSISSIPPI, ALABAMA, FLORIDA, GEORGIA, SOUTH & NORTH CAROLINA, VIRGINIA. Coordinator: H. D. Baggett. Contributors: W. L. Adair (LA), S. N. Brown (SB), R. W. Boscoe (RB), V. A. Brou (VB), J. Calhoun (JC), J. M. Coffman (JMC), R. Cavanaugh (RC), C. V. Covell (CVC), T. S. Dickel (TD), B. Dunleavy (BD), I. L. Finkelstein (IF), A. H. Freeman (AF), M. Furr (MF), R. Gilmore (RG), B. Godefroi (BG), J. Hyatt (JH), M. Israel (MI), J. Jordison (JJ), E. Knudson (EK), L. Koehn (LK), V. Lucas (VL), B. Mather (BM), P. Opler (PO), J. Pilkington (JP), S. Roman (SJ), J. Tuttle (JT), C. Watson (CW), R. Webster (RW), and W. D. Winter (DW). All apparent new U.S., STATE, COUNTY, PARISH records in caps, as are apparent new range extensions (SOUTH, etc.).

ARKANSAS. BUTTERFLIES: MF reported good general collecting June 13 in the vicinity of Wapanoca Wildlife Refuge, Crittenden Co. Notables included *Hylolycaena hyllus*, *Asterocampa clyton*, and *E. marcellus*.

MOTHS: AF, reporting for himself and P. Henry, gave the following Catocala data: June, Eden Isle, Cleburne Co., at UV and sugar bait; *C. epione*, *C. ilia*, *C. coccinata*, *C. micronympha*, *C. ultronia*, and *C. amica*, common; *C. mira*, *C. clintoni*, *C. andromedae*, *C. consors*, and *C. lineela*, few; one *C. messalina* on June 20 at UV. Same locality, Aug.-Sept. using bait traps; *C. vidua*, *C. paleogama*, *C. ulalume*, *C. junctura*, *C. flebilis*, and *C. maestosa*. During June 10-14, at Hope Hill Farm, Faulkner Co., using bait traps, AF recorded *C. epione*, *ilia*, *coccinata*, *ultronia*, *clintoni*, *mira*, *similis*, and *micronympha*.

LOUISIANA. BUTTERFLIES: MI provided the following records for *Anthanassa texana seminole*; 19-27 November (3♂, 1♀), Edgard, St. John Parish (LATE), all taken by VB; 16 October, Baker, East Baton Rouge Parish, taken by C. B. Carr. Inadvertently omitted from the 1981 report were new *Urbanus d. dorantes* records: September, Cameron PARISH, and October, Vermillion PARISH (VB).

MOTHS: VB Provided lists for 61 species new to the Louisiana Lepidoptera Survey, primarily micros (list on request). Notables included the following Saturniidae: *Callosamia securifera* (STATE & WEST), August, St. Tammany PARISH; *Automeris louisiana*, Edgard, St. John PARISH; and *Anisota consularis* (STATE & WEST), det. in VB collection by JT, 3 Aug. 1978.

TENNESSEE. BUTTERFLIES: The only new STATE record was confirmed by JH, *Thymelicus lineola*, 13 August, Warrior's Path St. Pk., Hawkins COUNTY (SOUTH) taken by RC. MF provided two new Shelby COUNTY records: *Incisalia niphon*, 25 April, in association with red cedar; and *Urbanus p. proteus*, 4 July, at buttonbush flowers. CW commented on unusual spring conditions in eastern TN; early warming trends brought out *Colias* and *Celastrina* by the third week in March, but this was followed by snow and rain persisting through much of April. MF indicated that it was a good season in western TN, with all common species out in good numbers, and that it seemed especially good for Satyridae. CW reported *I. niphon* on 6 May, Sullivan Co., *I. henrici* and *Falcapica midea* on 12 April, Washington Co., and that *C. bellona* was common at Roan Mt. St. Pk., Carter Co. IF collected a fine specimen of *Basilarchia arthemis astyanax* at cow dung, Laurel Run, Hawkins Co., on 14 August, which proved to be f. *albofasciata*. MF listed the following from Shelby Co. activities: *E. horatius*, 28 April; *P. catullus*, 28 April & 8 May; *A. campestris* and *H. phyleus*, 4 July; *S. hayhurstii*, 9 May; and *P. origines*, 24 May. At Indian Creek and Center Hill Lake, 6-8 June in Dekalb Co., she recorded *H. cresphontes*, *E. marcellus*, *S. cybele*, *A. andria*, *P. coenia*, *C. nycteis*, *M. cymela*, *C. gemma*, *H. sosybius*, *E. portlandia*, *L. bachmani*, *A. lyciades*, *T. confusus*, and *W. egeremet*, with others. On 2 May at Burgess Falls, Putnam Co., notables included *M. gryneus* and *Calycopis cecrops*, the latter common at dogwood blossoms; on 3 May at Edgar Evans St. Pk., Dekalb Co. she found *Artogeia virginensis* nectaring on blackberry blossoms, plus *F. midea*, *V. virginensis*, *M. gryneus*, *P. zabulon*, and *A. lyciades*.

MOTHS: All Shelby Co., MF, Germantown vicinity unless noted: Spingidae: *A. plebeja*, 9 Aug.; *H. diffinis*, 25 July; *A. cingulatus*, common, Oct.; *S. abbottii*, May and Aug.; *C. amyntor*, 23 May; *S. kalmiae*, 25 July; *P. modesta*, 25 July-9 Aug., more common than usual; *C. hageni*, June 1 and July 25; *X. tersa*, June & August; in early June, Dekalb Co. she listed *C. hageni*, *A. nessus*, *S. abbottii*, and *C. juglandis*, and took a pair of *D. hyloeus* at Fall Creek Falls St. Pk., Van Buren Co. Noctuidae: Shelby Co. records; *Catocala illecta*, 26 May-12 June; *C. piatrix*, 10 July through 18 Sept.; *C. amatrinx*, Aug.; *C. insolabilis*, 19 June; *C. cara*, June-July; *C. innubens*, June-July; *C. vidua*, Aug.-Sept.; *C. alabamiae*, several, 24 May-19 June; *C. clintoni*, late May; *C. minuta*, May-June; *C. nerissa*, 7 June; and *C. lineela*, June 17. *C. illecta* was also taken in Dekalb Co. in early June. Saturniidae: A number of *S. bicolor* were reared on *Gleditsia triacanthos*; *S. bisecta*, July-Aug.; *E. imperialis* was out in numbers, but few *C. regalis* compared to past years. Arctiidae: *E. scribonia* was very common July-Aug.; *Haploa cymene* was common in late July, and was taken as late as 17 August.

MISSISSIPPI. MOTHS: Spingidae: BM commented that *Enyo lugubris* had been unusually common in fall of 1982; this was reiterated by VB in Louisiana. Noctuidae: *Leucania calidor* appears to be a new STATE record. The following Catocala were noted from Vicksburg, Warren Co.: *C. amatrinx*, 28 Sept.; *C. maestosa*, 7-14 Oct.; and *C. carissima*, 20 Oct., 29 Oct., and 2 Nov. The latter appear to be unusually late for the species. JT reported an apparent new Saturniid STATE record, recently det. by him in the Miss. Ent. Museum: *Anisota consularis*, 1 Sept. 1916, Gulfport, Harrison Co. The records noted here and for Louisiana are surprising in that *A. consularis* has been previously considered to be a Floridian endemic ranging northward to the coastal plain region in Georgia!

ALABAMA. BUTTERFLIES: PO, investigating poorly-collected regions of the SE for his butterfly atlas, reported a new STATE record in Euristrymon ontario, Chatahoocchi St. Pk., Houston COUNTY. He noted an eastward emigration of Anaea andria in Henry Co. and Cleburne Co. He reported excellent collecting at Mt. Cheaha, Cleburne Co. on 2 May, recording 25 spp., including A. hianna, E. baptiseae (associated with crown vetch), I. nippon, and C. gorgone "ismeria".

MOTHS: EK, collecting at Saraland, Mobile Co., Sept. 4-5 gave the following records. Sphingidae: Dolba hyloeus, Paonias myops, P. excaecatus, Hyles lineata, and Lapara coniferarum. Noctuidae: Bomolocha bijugalis, Amolita roseola, Anomis flava, Elaphria versicolor, Erastria muscosa, Acherdoa ferraria, Zanclognatha obscuripennis, Gabara pulverosalis, and Spagueia leo. Geometridae: Pimaphera sparsaria, Itame gausperaria, Dichorda iradaria, Dyspteris abortivaria, and Cosymbria packardii. A list of others will be provided on request.

FLORIDA. RESTRICTED SPECIES: CVC reported on a survey made on Elliot Key by himself and his students: they found that Heraclides aristodemus ponceanus populations seemed "up", based on similar surveys made in the past; in the one-day survey, they reported observing at least 25 individual specimens on 18 May. Between May 1 and June 10, HDB received additional reports for eight sightings on North Key Largo, the first reports from this area in several seasons. Prognosis for survival and viability of extant colonies of Eumaeus atala appears excellent, after discovery of colonies and subsequent studies since 1979, this on the part of a number of individuals interested in conservation. This butterfly was feared extinct in 1965 with the loss of the Broward Co. colony. It is hoped that collectors will continue to use informed restraint with regard to the above; sale or purchase of any restricted species should be regarded as highly unethical.

BUTTERFLIES: VL reported Battus polydamas lucayus 20 Nov., Key Largo (unusual), and 21 Nov., Fairchild's Gardens, Dade Co.; JP reported P. palamedes abundant in Everglades Nat'l Park (ENP), Dade Co., 28 Mar.-4 April.; BD reported it common but worn, 13 April, Sampson, St. Johns Co.; JJ, collecting the Fakahatchee Strand, Collier Co. on 30 April, reported P. glaucus australis, P. troilus ilioneus, and others. RB observed females of Eurema daira ovipositing on Medicago lupulina, 10 May, Homestead, Dade Co. SR, reporting for himself and R. Jackson, noted Appias drusilla at Apollo Beach, Brevard COUNTY, in July. Junonia sp. "A", 19 May, IFAS Station, Dade Co. (HDB); BG and others noted an apparent decline for this in 1982; Junonia sp. "B", Brevard Co., July (SR). Numerous reports indicated that the Dingy Purplewing, Eunica monima, seems to be establishing in Dade Co. and Monroe Co. (LK, BG, VL, RB). Eunica tatila tatila was reported from Key Largo, Monroe Co., 29 April (JJ); Bear Lake Road Hiking Trail, ENP, Dade Co., 1 April (JP). JC noted the capture of an unusual specimen of Basilarchia archippus floridensis, March, Collier Co., in which the white band on the HW was similar to ssp. obsoleta. Marpesia petreus was reported commonly from Key Largo to Lake Okeechobee. H. charitonius tuckeri and Dryas iulia largo, 20 June, Markham Park, Broward Co. (BD); D. i. largo, Brevard Co., July (RB); RB noted that larvae of D. i. largo, when handled, roll into a ball and exude a yellow fluid from the tips of the spines; the fluid probably is either toxic or distasteful to predators. Calephelis virginensis, common, 13 April, Sampson, St. Johns Co. (BD); ENP, Dade Co., 3 April (JP); 17 Nov., Fakahatchee Strand (VL & LK). D. plexippus, D. gilippus berenice, and D. eresimus tethys were all reported on Bidens flowers together, 19 Nov., Florida City, Dade Co. (VL & LK). Electrostrymon endymion, Feb., Vic. Grassy Key, Monroe COUNTY, is a confirmational STATE record. The specimen was taken by M. Salter, and donated to the FSCA by W. Grooms. Chlorostrymon maesites was reared from eggs from a female taken 6 May, Stock Island, Monroe Co., on Albizia lebbek, the first LFP record for the species. (RB) Tmolus azia experienced a banner year, with numerous new records an indication of expanding range: 22 Dec., Davie, Broward COUNTY (IF); Plantation Key, Monroe Co. on 18 Nov. (RB); it was reported as common but local in Homestead and on Key Largo, where RB first noted a strong association with Leucaena latisiliqua, and subsequently discovered the larvae in flower heads. He also noted females of both Leptotes cassius and Hemiargus ceraunus ovipositing on Macroptilium lathyroides on 8 May in Homestead. Chlorostrymon s. simaethis was reported for the first time from Plantation Key, Monroe Co., 18 Nov. (RB), and from the IFAS Station, Homestead, Dade Co. on Nov. 27 (LK and VL). Ephriades brunnea floridensis, Pinelands area of ENP, Dade Co., April, (JP); Phocides pigmalion okeechobee, 1 April, Flamingo, Monroe Co. (JP); Euphyes pilatka, 3 April, ENP (JP); 17 Nov., Ochopee, Collier Co. (VL & LK); Cymaenes tripunctus, 27 Nov., Hugh Taylor Birch St. Pk., Broward Co. (VL & LK); Epargyreus zestos, 23 Nov., Plantation Key (VL & LK); P. panoquin & P. panoquinoides, Dec. 16-20, Lee Co. (JC); Euphyes dion ? (at present it is not clear whether both E. dion and E. alabamiae occur in Florida, or whether they all represent the latter - HDB). Numerous other records provided are omitted for lack of space and importance. JC also gave predator records for H. sosybius and B. isopthalma, Dec., Lee Co., by robber flies (Asilidae).

MOTHS: Sphingidae: TD provided the first U.S. larval food plant (LFP) record for Perigonia lusca, finding ova and larvae on Ilex krugiana, Homestead, Dade Co.; LA confirmed the LFP for Protambulyx strigilis as Schinus terebinthifolia, ex larva. in Nov., Sanibel Island, Lee Co.; Manduca brontes, several, June-August, Sanibel Island (LA, EK); Phryxus caicus, at UV, Collier-Seminole St. Pk., 11 July (EK) and 17 Nov. (VL); Aellopos tantalus, 24 Nov., Big Pine Key, Monroe Co. (VL). LV also found the following visiting Asystasia gangetica flowers at dusk, Key Largo, November: E. labruscae, E. alope, M. pseudothyreus, and X. pluto. RG took E. satellitia and E. achemon, Fakahatchee Strand, Collier Co. Noctuidae: RG reared larva of Catocala delilah on Quercus virginiana, April, Hernando COUNTY. LA took several Ophisme tropicalis, 25 June, Sanibel Island, Lee Co.; Boryzops purissima was reported from Collier-Seminole St. Pk. on 11 July (EK) and 17 Nov. (VL). Saturniidae: EK reported Callosamia angulifera from Marianna, Jackson Co. on 14 July; JC took Citheronia sepulchralis on 10 Sept., Lee COUNTY (SOUTH).

GEORGIA. BUTTERFLIES: IF, reporting for himself, A. Towers, and H. Flaschka, indicated a generally good season, with the exception of lower than normal numbers of S. diana and no E. laeta captures in 1982. In their investigations of Walker Co., at the Pigeon Mt. WMA, new COUNTY records for the following were given: Artogeia virginensis on 18 April; Anaea andria, Incisalia nippon, I. henrici on 24 April; S. liparops strigosum on 30 May; and L. bachmanii, A. cellus, and A. logan on 8 June. Other interesting spp. from their investigations were F. midea, common, 18 April; S. cybele, E. anhedon, and C. nycteis on 30 May; and that H. cresphontes apparently has three annual broods in this portion of the mountain region. IF, BG and A. Towers found good collecting for Megathymus harrisi during late August at Arabia Mt., Dekalb Co. IF also noted a new COUNTY record for S. cybele, taken 5 August, Athens, Clarke Co., by J. Maudsley. BD, collecting at Jekyll Island, Glynn Co. on 10 April, found Megisto cymela viola fresh and common, along with P. palamedes, P. sennae, V. virginensis, and V. atalanta rubria. DW, collecting at a granite outcrop in Columbia Co. on 1 May, found A. lyciades, T. bathyllus, T. pylades, P. tharos, L. bachmanii, H. sosybius, and Atrytonopsis hianna; the latter is a new COUNTY record. He also collected Ossabaw Island, Chatham Co. 17-29 April, where he turned a new COUNTY record in Calpodus ethlius among a 32 spp. list; other notables from Ossabaw included M. yuccae, F. midea, N. antiopa (ex. lv.), E. claudia, C. gemma, L. portlandia, L. bachmanii, and A. numitor. PO, driving through Jefferson, Johnson, Laurens, and Telfair Co. on 30 April, noted a northwestward emigration of J. coenia.

MOTHS: Saturniidae: JT reported finding cocoons of C. securifera on Magnolia virginiana within the city limits of

Ashburn, Turner COUNTY. Larvae of Anisota peigleri were defoliating oaks in the yard of IF during mid-August, Atlanta, Fulton Co. Sphingidae: RG noted the capture of D. versicolor, M. rustica, S. jamaicensis, C. catalpae, and X. tersa, on 17-18 August at Dahlonega, Lumpkin Co. Noctuidae: Good Catocala taken at MV by RG (same data as preceding) included C. angusi, C. piatrix, C. flebilis, C. insolabilis, C. vidua and C. relecta. SB reported the capture of 2 Zale perculata from DuPont, Clinch Co.; the species was rediscovered in 1981 by E. Quinter during investigations of the Okefenokee Swamp. Prior to this, it had been known from 2 specimens, one from GA and the other from FLA. He also reported other good catches from DuPont as Chytonix sensilis, Elaphria georgei, and Lagoa pyxidifera. DW provided a list of 99 spp. of moths, including the following new Chatham COUNTY records: Hypoprepia fucosa, Alypia octomaculata, Acronycta tritona, Heteanassa mimia, Orgyia detrita, Tacparia atropunctata, Cicinnus melsheimeri, Sisyrosea textula, Aglossa cuprina, and Parachma ochracelis. He also took the Sesiid, Podosesia syringae, with the aid of pheromone, on 1 May in Columbia Co.

SOUTH CAROLINA. BUTTERFLIES: RW reported the capture of Anthanassa texana seminole and Poanes yehl on 29 May, 7 mi. west of Cottageville, Dorchester Co.; on 30 May, 5 mi. NE Of Hardeeville, Jasper Co., he found C. minima, P. byssus, P. aaroni, P. yehl, A. aesculapius, and P. ocola. On the same data at Edisto Island, Charleston Co., he added Brephidium isophthalma. BG, collecting near the Savannah River Wildlife Refuge, Jasper Co. on 30 August, reported Problema bulenta and Poanes viator; just north of Hardeeville along US 17, he found Poanes yehl.

MOTHS: Saturniidae. JC, collecting during the Xmas Holidays, found several cocoons of Callosamia securifera on M. virginiana in Berkeley Co. RG, HDB & F. Hedges, collecting with MV along the Savannah River in Edgefield Co. on 16 August, found A. luna, C. angulifera, E. imperialis, C. sepulchralis, S. bicolor, A. stigma, M. jasminearum, P. modesta, C. catalpae, P. excaecatus, L. coniferarum, and others.

NORTH CAROLINA. BUTTERFLIES: PO noted that Pterourus palamedes was locally common in Chowan Co., Tyrell Co. and Washington Co. on 30-31 May; LK reported it from Currituck Co. on 15 May; RW listed it from the Holly Shelter Game Area (HSGA), Pender Co. on 4 April and from the Sandhill Wildlife Area (SWA), Richmond Co., on 3 May. E. marcellus was taken 10 May, Durham Co. and on 4 April, HSGA by RW. RW listed F. midea 25-30 March from Duke Forest (DF), Durham Co. and 21 March, SWA; RB noted that A. nicippe was ovipositing on Cassia tora, and ignoring the much more abundant C. fasciculata at Sunbury, Gates Co. on 20 August. RC found P. sennae and A. nicippe still on the wing on 4 December at Cherry Point, Craven Co. RW found L. bachmanii on 20 Aug. at DF. LK reported E. creola on 12 June from Currituck Co; RW listed it from the SWA on 12 May and 14 Aug. Cylopsis gemma was taken by RW on 4 April, HSGA, and 11 April at DF. Neonympha areolata was found at the Green Swamp Game Area (GSGA), Brunswick Co. in May, and at the SWA on 19 June. Calephelis virginiana was captured at North Harlowe, Craven Co. on 23 May, and on 1 May at the GSGA, (RW). LK took E. ontario and P. m-album on 12 June in Currituck Co. RW listed the following: Mitoura hesseli, 1 May and 4 April, GSGA; M. gryneus, 11 April at DF; S. liparops strigosum, 13 June, GSGA; S. kingi, 13 June, GSGA, and 6-12 June, North Harlowe; L. phlaeas, 21 March, SWA; Incisalia augustus croesoides, 21 March, SWA; I. irus, 10 April, SWA; I. henrici, 21 March-24 April, common, SWA; P. m-album, 21-23 March, SWA on wild plum blossoms; E. ontario, 23 May, Beaufort, Carteret Co. (abundant). RC reported Hesperia attalus on 27 May at Cherry Point, Craven COUNTY, and A. loammi, Ft. Macon St. Pk., Carteret Co., on 15 May. LK, collecting only in Currituck Co., listed P. aaroni, P. viator, and E. dion on 29-30 May and 12 June; P. ocola on 12 June; P. yehl, P. panoquin and P. verna 29-30 May. RW provided the following: H. metea, E. martialis, and T. confusis, April, SWA; S. hayhurstii and E. baptisiae, August, SWA; Hesperia attalus, 14-17 July and H. meskei, 19 June-1 July, then again common on 30 September at the SWA (in most locales, H. attalus seems to precede H. meskei in emergence; this also confirms a second brood for meskei in NC); P. yehl, 6 June, North Harlowe, and 11 June, SWA; E. bimacula, 22 May, GSGA, common; A. hianna, 27 April-7 May, SWA; A. loammi, 13 April, GSGA; Oligoria maculata, 21 May, Bolton, Columbus Co. and 6 June, Havelock, Craven Co. A. hegon and A. aesculapius, April, SWA, and 10 May, Jct. I-85 and Neuse River, Durham Co.; A. alternata, 16 April-1 May, GSGA and 24 April-7 May, SWA; A. reversa, 15 April and 14 Aug., SWA and GSGA, 4 April, HSGA; A. carolina, 29 April-14 June, SWA (noting that carolina preferred shady areas, while reversa preferred open areas, but always both strongly associated with cane); Megathymus yuccae, sight, 15 April, SWA, and old tents, June; ex. lv. in tents collected at GSGA during Nov., emerged 1-10 April.

MOTHS: Saturniidae: 30 adults of Callosamia securifera emerged from cocoons noted in last summary by RW; he added the following LFP records from the SWA in September--Citheronia regalis on Diospyros virginiana; E. imperialis on Pinus sp. and on Sassafras albidum; and A. luna on D. virginiana and Liquidambar styraciflua. C. sepulchralis was taken at light on 26 June, DF. Sphingidae: Sphinx franckii - ova from a female taken 18 June at Duke Forest provided 10 additional specimens emerging 15-22 August, reared on Fraxinus. Noctuidae: C. ilia, C. similis, and C. epione were collected at bait on 2 June, SWA; C. connubialis was taken at light at DF on 11 June; C. gracilis, 19 June, SWA; and C. marmorata was collected between 20-26 June at bait and light, Duke Forest. RG, HDB, and F. Hedges collected 15 August at Fontana Dam with MV, where they found C. andromedae, C. connubialis, C. paleogama, C. relecta, and C. flebilis. It appears that in the piedmont areas, Catocala were early, while in the mountain region, they were late by normal standards.

VIRGINIA. BUTTERFLIES: PO collected the following on 4 September: H. sosybius, Caroline Co.; P. aaroni and P. panoquin, Richmond Co.; S. cybele and C. pegala (LATE), King George Co. JH collected E. olympia on 8 May, Lee Co.; RB noted that a female S. kingi taken near Suffolk, Nansemond Co. on June 19 readily oviposited on Symplocos tinctoria. VL, collecting on 13 July with J. Shuey in Montgomery Co., found A. vialis, Calephelis borealis, and C. pegala alope. LK provided the following from his trips through VA: in the Dismal Swamp near Suffolk, he recorded F. midea and I. henrici on 23 April; A. carolina and A. aesculapius on 15 May; S. liparops strigosum and Mitoura hesseli on 27 May; P. viator, E. dukesi, E. marcellus, P. palamedes, P. sennae, A. halesus, S. liparops strigosum, E. creola, and others on 11 June; C. gemma, H. attalus, A. arogos, A. alternata, and M. hesseli on 17 July. At Virginia Beach, on May 30 he took P. viator, E. marcellus, and P. palamedes; on 12 June he added E. ontario, P. yehl, P. aaroni, E. dukesi, P. panoquin, and P. ocola. Spring collecting in Augusta Co. netted the following: Erora laeta, Celastrina ebenina, and G. lygdamus on 24 April, and Prygus centaurae wyandot, I. irus, I. augustus and E. olympia on 16 May. He added A. hianna on 31 May in Clark Co., along with A. cellus, S. hayhurstii, and T. confusis from Fairfax Co.

MOTHS: VL, collecting in Wythe Co. 13-14 July, reported the following captures: Manduca quinquemaculata, Lapara coniferarum, L. bombycoides, Paonias astylus, P. excaecatus, Darapsa myron, D. pholus (Sphingidae); Callosamia angulifera, Anisota stigma, Citheronia regalis, C. sepulchralis (Saturniidae); Haploa clymene, Hypoprepia fucosa (Arctiidae); Catocala ilia, and Harrisimemna trisignata. JC reported that he had successfully reared Catocala dulciola ex ova from a female taken in Timberville on Crataegus, the first LFP record for this species. C. dulciola is one of the rarer eastern N.A. Catocala.



ZONE 7. NORTHEAST: QUEBEC (to 50th parallel), MARITIMES, NEW ENGLAND, NEW YORK, NEW JERSEY, PENNSYLVANIA, DELAWARE, MARYLAND, D.C. Coordinator: Dave Winter (DW). Contributors: William Anderson (WA), A. E. Brower (AEB), Charles Burkhart (CB), George Ehle (GE), John Fales (JF), Richard E. Gray (RG), L. Paul Grey (LPG), W. R. Grooms (WG), David F. Hess (DH), Jeff Ingraham (JI), James P. Holmes, (JH), P. J. Kean (PK), Leroy Koehn (LK), Vincent P. Lucas (VL), Vickie Mason (VM), Robert May (RM), Gerald McWilliams (GM), Paul Opler (PO), Calvin Schildknecht (CS), Richard H. Smith (RHS), Ray E. Stanford (RES), Mervin L. Wenger (MW), Tom Williams (TW).

An altered format, derived from a suggestion of Cliff Ferris, is being tested in Zone 7 this year to simplify searches for information on particular species. Reader feedback will be welcomed.

Under each province or state you will find a systematic list of the species being reported upon, each followed by one or more "locality numbers". Following the species list is a list of locality numbers, each indicating a collecting site and date, referenced to the reporting collector. An underlined locality number indicates a county record for that species.

In the case of butterflies, entries are cited as county records if they fill in blank counties in Opler's February 1982 County Atlas of Eastern United States Butterflies (Draft), even though many may seem to be mundane species.

Behavior, life cycle, and predation observations for a particular species are detailed directly after the locality number.

QUEBEC, MARITIMES: no reports received.

MAINE: Butterflies were noted to be generally scarce (AEB,CB,DW), but LPG noted moth populations very high until mid-July, then a crash, possibly related to widespread budworm spraying. Epargyreus clarus, 8; Hesperia comma laurentina, 6; Polites coras, 4; Polites mystic, 3; Euphyes bimacula, 8; Amblyscirtes hegon, 9; Pterourus glaucus, 8; Epidemia epixanthe, 5; Polygonia faunus, 7; Nymphalis vau-album, 7; Vanessa virginiana, 1; Enodia anhedon, 6; Megisto cymela, 2; Coenonympha inornata, 8; Cercyonis pegala "maritima", 4; C. nephele, 6; 7; Dolba hylaeus, Sphinx canadensis, S. luscitiosa, 10; Ufeus satyricus, 11; Catocala coelebs, 12. LOCALITIES: AEB: (1) Augusta, Kennebec Co., 25 May; (2) ibid. 18 June; (3) ibid. 2, 13 July; (4) Scarborough, Cumberland Co., 21 July; (5) ibid. 22 July. CB: (6) Somerset Co., 11 Aug.; (7) Oxford Co., 12 Aug. RES: (8) Yarmouth, Cumberland Co., 7 July; (9) Salisbury Cove, Hancock Co., 9 July. LPG: (10) Lincoln, Penobscot Co., July; (11) ibid. 13 Oct. DW: (12) Islesboro, Waldo Co., late Aug.

NEW HAMPSHIRE: Thymelicus lineola, 4; Incisalia eryphon, 1, STATE; Erora laeta, 2; Sphinx chersis, 5; Alypia langtoni, 6; Cucullia convexipennis, 10; Sympistis melaleuca, 12; Lithophane bethunei, 13; Eremobina leucoscelis, 11; Papaïma frigida, 3; Conservula anodonta, 5; Autographa flagellum, 7; Eosphorapteryx thyatiroides, 9; Chrysoaspis venusta, 8; Catocala semirelictica, 14; Ellida caniplaga, 15; Dasylophia thyatiroides, 16; Eupithecia cretacea, 12, about stands of the larval foodplant, Veratrum viride; Heliomata cycladata, 17. LOCALITIES: RG: (1) Errol, Coos Co., 22 May; (2) Second College Grant, Coos Co., 23-28 May; (3) Lebanon, Grafton Co., 23 Sept.-1 Oct. JH: (4) Jefferson, Coos Co., 3-7 July; (5) ibid. 26 July; (6) ibid. 11 July; (7) ibid. 6, 18 July; (8) Milan, Coos Co., 17,25 July; (9) Jefferson, 15 Aug.; (10) ibid. 18 July; (11) ibid. 26 Aug.; (12) Mt. Washington, Coos Co., 14 July; (13) Concord, Merrimac Co., 15 Sept.; (14) Jefferson, 13 Aug.; (15) ibid. 28 June; (16) ibid. 17-29 June; (17) ibid. 17 July.

VERMONT: Fenesequa tarquinius, 1; Basilarchia arthemis, 1; C. pegala nephele; 1. LOCALITY: CB: (1) Lamoille Co., 3-4 Aug.

MASSACHUSETTS: an astonishingly poor year, in terms of both numbers and species, throughout the season (DW).

RHODE ISLAND: no report, other than that large numbers of D. plexippus were roosting on pines on Block Is. on 4-5 Sept.

CONNECTICUT: Coenonympha inornata, 1, STATE, and a pronounced southern range extension. LOCALITY: VM: (1), Woodbridge, New Haven Co., 17 June.

NEW YORK: L. melissa samuelis, 2, second brood observed in considerable numbers, condition fresh to worn; Rheumaptera hastata, 1. LOCALITIES: CB: (1) New York City, 2 July; (2) Albany Co., 1 Aug.

NEW JERSEY: Thorybes bathyllus, 2; Anxylophora numitor, 7; Poanes massasoit, 6; f. "suffusa" 4; Poanes viator, 5; Euphyes bimacula, 2; Battus philenor, 8; Falcapica midea, 10,11; Satyrium caryaevorum, 4; Calycopis cecrops, 4; Mitoura gryneus, 3, second brood numerous and fresh; Euristrymon ontario, 2,9; Satyroides appalachia, 12; Danaus plexippus, 7; Leucania junicola; 13; Lithophane bethunei, 13; L. thaxteri, 13. LOCALITIES: CB: (1) Bergen Co., 30 May, 10 June; (2) Lakehurst, Ocean Co., 26 June; (3) ibid. 24 July. JI: (4) ibid. 26 June. RM: (5) Cedar Grove, Essex Co., 12 Aug.; (6) West Caldwell, Essex Co., 17 July; (7) ibid. no dates; (8) Allemuchy State Park, Essex Co., 19 Sept. TW: (9) Lakehurst, Ocean Co., 1 July; (10) May's Landing, Atlantic Co., 29 Apr.; (11) Belleplain St. For., Atlantic Co., 29 Apr.; (12) Lebanon St. For., Burlington Co., 1 July; (13) Wharton St. For., Burlington Co., 3 Nov.

PENNSYLVANIA: several comments of a lean year, with hairstreaks and skippers much diminished. Staphylus hayhurstii, 17, STATE; Erynnis baptisiae, 19, 20; Erynnis zarucco, 15; Hesperia leonardus, 3; Atrytone logan, 5; E. ruricola metacomet, 6; Eurema lisa, 10,11; Fenesequa tarquinius, 2; Hyllolycaena hyllus, 12; Harkenclenus titus, 1; Satyrium acadica, 7; Satyrium liparops, 8; Mitoura gryneus, 14; late, probably representing an accidental third brood; Incisalia augustinus, 2; Parrhasius m-album, 18, common in early Sept.; Glaucopsyche lygdamus, 19; Libytheana bachmanii, 4; Clossiana bellona toddi, 13; Nymphalis vau-album, 16; B. arthemis astyanax, 6; Asterocampa celtis, 1; Mellilla xanthometata, 9; Anacamptodes ephyrraria, 9. LOCALITIES: GE: (1) Lancaster Co., no date; (2) ibid. May; (3) ibid. late Aug.; (4) ibid. Sept. VL: (5) Warren Co., 8 July; (6) ibid. 20 June; (7) ibid. 18 July; (8) McKean Co., 18 July; (9) Cumberland Co., 1 Aug. GM: (10) Union City, Erie Co., 30 July; (11) Waterford, Erie Co., 2 Nov. CS: (12) Gettysburg, Adams Co., 30 May & 6 June; (13) ibid. 3 May & 17 Oct.; (14) ibid. 3 Oct. TW: (15) Fairmount Park, Philadelphia, 2 Sept.; (16) State Game Land #127, Monroe Co., 13 July. MW: (17) Lancaster Co., 4 Aug.; (18) ibid. 4-18 Sept. PO: (19) Monroe Twp. Bedford Co., 15 May; (20) Port Royal, Juniata Co., 8 Aug.

DELAWARE: (Lepidopterists have at last discovered Delaware!) Thorybes bathyllus, 7. Nastra lherminier, 13; Hesperia metea, 1, 7; Wallengrenia otho, 2,8; Atelopedes campestris, 13,14; Atrytone logan, 3; Atrytonopsis hianna, 1,7; Euphyes conspicua, 3,9; Amblyscirtes aesculapias, 11,12; A. carolina, 11 both species STATE records; Pterourus palamedes, 11; Calycopis cecrops, 14; Incisalia augustinus, 10; I. henrici, 10; Parrhasius m-album, 6,12; Clossiana selene myrina, 5;

Enodia creola, 11, STATE; Satyrodes appalachia, 4; Cyllopsis gemma, 11, 12. LOCALITIES: PK: (1) Nanticoke Wildlife Area, Sussex Co., 15 May; (2) Sowbridge Ck., Sussex Co., 29 July; (3) Sussex Co., 29 July. RHS: (4) Thompsonville, Kent Co., 14 Aug.; (5) Shorts Beach, Sussex Co., 5 July, 14 Aug., 3 Sept.; (6) Owens, Sussex Co., 3 Sept.; (7) site #1, 15 May; (8) Prime Hook, Sussex Co., 29 July; (9) Bethel, Sussex Co., 3 Sept.; (10) site #1, 25 April. LK: (11) site #8, 11 May; (12) Indian River Area, Sussex Co., 12 May. PO: (13) Bethany Beach, Sussex Co., 5-6 Sept.; (14) Gumboro, Sussex, 5-6 Sept.

MARYLAND: While several Maryland collectors reported poor collecting, their reports suggest that "poor" for them is better than "excellent" for some of the rest of us! Thorybes pylades, 3; Hesperia metea, 18; Polites mystic, 34; Poanes hobomok + "pocahontas", 5; Euphyes conspicua, 5; Panoquina ocola, 16, late; Battus philenor, 18; Heraclides crespontes, 20 (♀ observed ovipositing on Hop Tree, Ptelea trifoliata), 31; Pontia protodice, 24; Ascia monuste phileta, 15; Zerene cesonia, 13; Phoebis sennae, 15, 16; Eurema nicippe, 11; Satyrium kingi, 30, STATE; Incisalia augustinus, 1, 17; I. niphon, 2; Parrhasius m-album, 10, 32, 33, 38; Erora laeta, 7; Calephalis borealis, 9, late; Agraulis vanillae, 14, 15; Speyeria cybele, 4, 22; Clossiana selene myrina, 12, 23, 29; Euphydryas phaeton, 26 (of some 15 larvae collected from Turtlehead, majority were parasitized by braconids, probably Apanteles sp.), 35; Nymphalis vau-album, 6; B. arthemis astyanax, 6, 21 (both observers noted many hundreds puddling along dirt roads; specimens with full and partial white banding were present in small numbers, as well as one ab. cerulea, 6, STATE); Asterocampa celtis, 38, 21 (at latter site, this species present in huge numbers, more than 1981; pupation commonly on underside of leaves of low shrubs, especially Spicebush, beneath the Hackberry trees; numerous mature larvae and pupae were seen being sucked dry by the hemipteran Apateticus cynicus); A. clyton, 21 (part of the foregoing celtis scene); Enodia anthedon, 25, 36; Satyrodes appalachia, 4, 37; Hemeuptychia sosybius, 8; Megisto cymela, 4; Deidamia inscriptum, 27 (found 30 males waiting in one phone booth; larvae of this species and of Alsophila pometaria, Paleacrita vernata, Malacosoma disstria, and Phigalia titea were reported by the State Dept. of Agr. to have defoliated 28,000 acres of local forest and led to a massive assemblage of "caterpillar hunter" beetles: Calosoma willcoxi, scrutator, and frigidum); Lapara coniferarum, 26; Paonias excaecata & myops, Cressonia juglandis, 26; Dolba hylaeus, 23 (ex larva on Ilex verticillata); C. promethea, A. luna, A. polyphemus, and A. rubicunda, 26; C. paleogama & ilia, 28. LOCALITIES: JF and WG: (1) Calvert Co., 24 Apr.; (2) Wicomico Co., 30 Apr.; (3) site #1, 1 May; (4) Dorchester Co., 2 June; (5) Frederick Co., 9 June; (6) Allegany Co., 16, 20, 23 June; (7) Indian Springs, Washington Co., 5 July; (8) site #1, 22 July; (9) site #6, 4 Aug.; (10) site #4, 11 Aug., 15, 19 Sept., 3, 6 Oct.; (11) ibid. 22 Aug.; (12) Queen Anne Co., 29 Aug.; (13) site #4, 8 Sept.; (14) site #4, 3 Oct.; (15) Somerset Co., 20 Oct.; (16) Pt. Lookout, St. Mary's Co., 14 Oct. PK: (17) Nassawango Ck., Worcester Co., 29 Apr.; (18) Millville, Worcester Co., 15 May; (20) Seneca, Montgomery Co., 17 May; (21) Green Ridge State For., Allegany Co., 17 May; (22) Union Mills, Carroll Co., 19 June; (23) Cranesville Bog, Garrett Co., 28 Aug.; (24) Crownsville, Anne Arundel Co., 9 Aug.; (25) Glades Swamp, Garrett Co., 10 July; (26) Carey Run, Garrett Co., 9-11 July; (27) Sideling Hill, Washington Co., 18 April-1 May; (28) Keyser's Ridge, Garrett Co., 29 Aug. WA: (29) same as #26; (30) site #17, 22 July. RHS: (31) Little Orleans, Allegheny Co., 9 May; (32) Denton, Caroline Co., 3 Sept.; (33) Benton Branch Park, Howard Co., 19 Sept.; (34) Piney Grove, Garrett Co., 11 July; (35) site #24, 18 June; (36) Henryton, Howard Co., 21 Aug. PO: (37) Dorchester Co., Talbot Co., Wicomico Co. & Worcester Co., 5-6 Sept.; (38) Caroline Co., 5-6 Sept.

URBAN COLLECTING: during Aug. & Sept. 1981 and mid-June to mid-Aug. 1982, DH observed the following 22 species within Philadelphia, largely in the Fox Chase - Lanwdale area: P. communis, P. catullus, P. themistocles, P. polyxenes, P. glaucus, P. troilus, A. rapae, C. philodice, C. eurytheme, F. tarquinus, S. melinus, E. comyntas, C. ladon, E. claudia, P. tharos, P. interrogationis, P. comma, N. antiopa, V. atalanta, B. arthemis astyanax, B. archippus, and D. plexippus.

MIGRATION: JF reports the first north-bound D. plexippus in Calvert Co., 25 April. Regular southward migrants were noted starting 4 Sept., increasing until 24 Sept. when there was a steady flight across Chesapeake Bay to the southwest from 7 a.m. until noon. A lull for nearly two weeks was broken by heavy flights on 6 & 9 Oct., when 5.2 and 9.5 butterflies per minute were logged at 1:06 and 1:37 p.m. EST, respectively (Calvert Co.). 14 Oct., at Pt. Lookout, St. Mary's Co., a rate of 3.4 per minute were observed, in company with a few C. eurytheme and J. coenia. The last individual seen was 8 Nov.



ZONE 8 THE FAR NORTH: ALASKA, NORTHERN CANADA. Coordinator: Kenelm W. Philip. Contributors: J. Troubridge, K. Philip and collectors for the Alaska Lepidoptera Survey. Previously unreported localities or species are emphasized; collecting by ALS volunteers unless noted. Note regarding Alaska Lepidoptera Survey: plans for a third trip to Magadanskaya Oblast' fell through when the official invitation arrived too late in the season, so ALS activities were restricted to Alaska and the Yukon. K. Philip spent one week (with excellent weather) at Klwane Lake with J. Troubridge--45 species of butterflies were obtained in the area. Rainy weather interdicted most collecting outside of two weeks in late June and early July.

ALASKA. Weather: Interior Alaska had almost a mirror image of the 1981 season. Spring was very late indeed, and it was cold and rainy until 25 June. Two weeks of excellent weather followed, and the rains returned in early July. Except for that one two-week period there was little collecting. Range extensions: Clossiana distincta and Erebia mackinleyensis from the Alaska Range just south of Farewell (about 140 miles SW of their Denali National Park records, previously their SW limit in the Alaska Range). NORTHWEST COAST: Sisaulik (Sheshalik), NE of Kotzebue, 9-12 July: Colias philodice, Lycaeides argyrognomon, Agriades franklinii, Clossiana chariclea, Erebia theano (common), Oeneis polixenes. INTERIOR: Murphy Dome & Eagle Summit: the usual species, but flight season much delayed (first butterfly on Murphy Dome seen three weeks later than in 1981). ALASKA RANGE (the last of these sites was collected in both 1981 and 1982--the 1981 data arrived too late for the Summary): Lone Mountain, 40 miles W of Farewell, 6-10 June: Papilio machaon, Artogeia napi, Colias palaeno, Agriades franklinii, Erebia youngi, Oeneis melissa. Terra Cotta Mts. 25-38 miles S of Farewell, 19-30 July: Clossiana polaris, Erebia mackinleyensis, E. fasciata, O. melissa. Sheep Ck./Tin Ck. area, 5-17 miles S of Farewell, 29 June-8 August 1981, 14-15 July 1982: Parnassius phoebus, Artogeia napi, Colias hecla, Lycaeides argyrognomon, Clossiana chariclea, C. distincta, Erebia mackinleyensis, E. theano (common), E. youngi, Apantesis quenseli, Arctia caja. SOUTHEASTERN ALASKA: mile 39-41 Haines Highway (just S of AK/BC border), 21 June-11 September: Artogeia napi, Anthocharis sara, Plebejus saepiolus, Celastrina ladon, Polygonia satyrus, P. faunus, Nymphalis milberti.

YUKON TERRITORY. New collecting site; Nickel Creek, reached by an unmaintained dirt road off Quill Creek Road (Alaska Highway, mile 1111.4/km 1778.6). The road (4-wheel drive recommended) leads to a pass at about 4200 feet with two small lakes, which lies approximately at treeline. Numerous butterflies were congregating on damp patches on the roadside and

lake margins, and collecting was easy on the more or less level road. Notable capture: Oeneis uhleri cairnesi, Nickel Creek. All Yukon reports following are from Philip and Troubridge: head of Bear Creek, Mt. Decoeli, 1-2 July: Erynnis persius, Parnassius eversmanni, Papilio machaon, Pontia occidentalis, Artogeia napi, Colias hecla, C. gigantea, C. palaeno, C. nastes, Glaucopsyche lygdamus, Plebejus saepiolus, Vacciniina optilete, Agriades franklinii, Proclrossiana eunomia, Clossiana improba, C. polaris, C. freija, C. titania, Erebia fasciata, E. new species (being described), Oeneis bore, O. polixenes. Nickel Creek, 3-6 July: Erynnis persius, Pyrgus centaureae, Carterocephalus palaemon, Parnassius phoebus, Papilio machaon, Pontia occidentalis, Artogeia napi, Euchloe creusa, Colias philodice, C. hecla, C. nastes, C. palaeno, Everes amyntula, Glaucopsyche lygdamus, Lycaeides argyrognomon, Plebejus saepiolus, Vacciniina optilete, Agriades franklinii (common), Boloria napaea, Proclrossiana eunomia, Clossiana frigga, C. improba, C. freija, C. titania/chariclea, Phyciodes pratensis, Coenonympha kodiak, Erebia rossii, E. disa, E. mackinleyensis, E. fasciata, E. theano, E. youngi, E. new species (being described), Oeneis bore, O. uhleri cairnesi. Burwash Creek Road, 3-5 July: Erynnis persius, Polites draco, Colias philodice, C. christina, C. hecla, C. gigantea, Glaucopsyche lygdamus, Lycaeides argyrognomon (very abundant), Plebejus saepiolus, Phyciodes pratensis, Euphydryas anicia, Coenonympha kodiak, Erebia disa, Oeneis jutta. Sakiw Creek, 3 July: Polites draco, Colias philodice, C. christina, Lycaeides argyrognomon, Clossiana freija, Coenonympha kodiak, Erebia disa, E. epipodea. Destruction Bay, head of Nines Creek, 29 June (Troubridge): additional species (see 1976, 1980 Annual Summaries): Clossiana freija, Erebia rossii, Oeneis melissa.



ZONE 9 NORTHERN NEOTROPICS. Coordinator: Eduardo C. Welling M. Contributors: George W. Busby III reporting for himself and Robert Busby, Dennis Currut, Richard Henderson, Debbie and Michael McInnis, David Pinder, and Kent Scott. Weather Summary: In general drought seemed to be the key word throughout most of central Mexico and especially in the Mesa del Norte (Chihuahua, Coahuila, San Luis Potosí, Durango, etc.) where it was particularly severe. Heavy rains in Sonora during July and August kept that state from being put on the drought list, and very heavy snowfalls, the heaviest in the last 10 years in the mountains of that state, during November and December, are worthy of note. Heavy rains also fell in northern Baja California Norte during November and December, which may help collecting conditions immensely in 1983. In the Peninsula of Yucatán, rainfall was quite normal everywhere and above normal in central Quintana Roo, where crop failures stemmed from excessive rainfall.

MEXICO, VERACRUZ (state), including localities of Jalapa, Coatepec, Xico, Catemaco, Fortín de las Flores, Tlapacoyan, and Omealca. G. W. Busby reported on the above localities without detailed information about which of the 475 species of butterflies, taken during the period July 27-August 5 by himself and those he reported for, came from which of the above mentioned localities. Nevertheless the list is very interesting and shows what can be found in a nine day jaunt to that area, stretching about 350 kms in length. In total, 22 Papilionidae, 37 Pieridae, 4 Danaidae, 19 Ithomiidae, 20 Satyridae, 5 Brassolidae, 2 Morphidae, 14 Heliconiidae, 86 Nymphalidae, 45 Riodinidae, 80 Lycaenidae, and 141 Hesperidae are reported on. Anyone interested in having a copy of the list should write to Mr. Busby, as only fragments of it can be included here. Some of the more interesting captures include Parides sesostris zestos, Papilio astyalus, pilumnus, garamas, victorinus, Battus laodamas, philenor, Dismorphia fortunata, amphione, Itaballia pisonis, Archonias tereas, Ithomia leila, Napeogenes tolosa, Hyposcada virginiana, Pierella lina, Euptychia usitiata, labe, Cyllopsis gemma, Eueides vibilia, Hypanartia kefersteini, Anaea oenomais, Adelpha leuceria, felderi, Doxocampa cherubina, Phyciodes ptolyca, vesta, ardys, Lymnas cephise, Symmachia accusatrix, championi, Tharops menander, Theope basilea, Cyanophrys goodsoni, Strymon zeba, gabatha, Thecla badeta, plusios, denarius, lollia, serapio, arza, philinna, cydrara, scopas, minthe, ares, semones, nugar, thales, pseudolongula, gargophia, Calycopis bactra, Astrartes gilberti, aulestes, megalurus, Urbanus pronta, militas, Nascus caepio, Aethilla lavochrea, Carystoides abrahami.

MEXICO, SONORA. Welling noted that in the mountains around Cananea, 1525m elevation, butterflies were exceedingly scarce during July, in spite of good almost daily rains. Vegetation was just barely beginning to leaf out after the first two weeks of rain which ended a prolonged 9 or 10 month drought. A few Papilio philenor were observed, along with a number of Ministrymon leda, these being about the only things observed. Moths were scarce at mercury vapor lights, only a few Celerio lineata and a few other odds and ends being observed. Sugaring in the forests a few kms west of the town produced only a few drab Noctuidae.

MEXICO, YUCATÁN. The season in this state looked to be about fair only, but with probably many species being down in numbers, just as the preceding year. Sphingidae and Saturniidae scarce again.

MEXICO, QUINTANA ROO. Rhopalocera up a little from 1981, but not in all groups. One striking comeback was Euptychia metaluca, unnoticed during the past 6 or 8 years. Sphingidae and Saturniidae down a little from the slightly improved populations of 1981.



ZONE 10. SOUTH AMERICA. Coordinator: Boyce A. Drummond. Contributors: K. S. Brown, Jr. (KB), B. A. Drummond (BD); J. D. and F. Preston (JFP). After two years of no reports (but see account of Lepidopterists' expedition to Ecuador in Sep/Oct 1980 issue of NEWS), zone 10 reappears under new guidelines [see NEWS 1980(5):64]. Three countries are covered by reports, one of which [Brazil] presents a wealth of biological and climatological detail from a resident collector (KB). Note that all three reports mention wetter-than-usual dry seasons.

BRAZIL: KB reported that 1982 was the "year of the butterfly" (and of other insects as well) in Brazil, especially in the southeast and in Amazonia, because of favorable weather (a cool summer and a warm winter with unseasonable rains). The year was predicted in December 1981 by a near-plague of brightly striped larvae of Rothschildia arethusa, which invaded a large area in Monjolinho (Fazenda Santa Elisa, near Campinas, SP), defoliating tree after tree in various families before pupating en masse. Most larvae and pupae were diseased or parasitized; very few adults emerged. The analogous generation in December 1982 was small and localized. REGION OF CAMPINAS (SÃO PAULO): A variety of new records and population explosions were recorded. Anteos clorinde, normally just a sporadic migrant, was common all year round. A major invasion occurred by the usually absent Amazonian troidine Parides neophilus eurybates, starting during an incredible population peak of P. proneus and P. bunichus on flowers of Vernonia (in Feb.) and Gochmatia (in Mar.). While the two common species, resident in Campinas, were down to subnormal levels by the year's end, P. neophilus became more and more common through the exceptionally humid and warm winter, and was the dominant species (after proneus) by September, establishing firm colonies in several areas. On December 20, a ♀ hybrid Mechanitis polymnia x lysinnia [see

Biotropica 14(4):288-294] was captured in Monjolinho. Observations on migrations of non-resident heliconians included the following: the fall migration of *H. sara* apseudes from the coast was small, only in late April; the western invader *Dione moneta* was exceedingly abundant in April and May; only one (fresh) specimen of *Philaethria wernickei* was seen (in November). CAMPINAS FOREST PRESERVE (SÃO PAULO): In mid-February, the road through the preserve was full of *Barbicornis basilis* (Riod) for the first time in many years. The warm humid fall season (March-June) saw a burned corner of the Preserve grow thick in vines and *Lantana*, giving bumper crops of several butterflies, mostly vine-feeders: *Thyridia psidii*, *Hypothyris euclea*, *Actinote* (6 spp), *Dione moneta*, *Chlosyne lacinia*, *Dynamine* (4 spp), *Adelpha mincia*, *Biblis hyperia*, *Doxocopa laurentia*, *Memphis* (3 spp.), *Papilio torquatus*, *P. hectorides*, and *P. astyalus* [many eggs and larvae of *astyalus* were found and reared through on various species of *Galipia* (Rutaceae)]. In May, two *Parides* swallowtails (one *P. proneus* and one *P. agavus*) flew from the corner of the Preserve five miles SE to a heavily visited patch of *Vernonia polyanthes* in Amarias (Faz. Santa Elisa); this indicates both broad-scale and conditioned movement in these insects. By early July, the total number of *Parides* marked and recaptured had doubled over that reported in late 1981 (J. Res. Lepid. 19:199-266), and continued climbing in the second half of the year, though more slowly and much biased towards *P. neophilus*. [By way of contrast, almost all *Parides* disappeared from the Horto Florestal colonies (in Sumaré) after a very large peak of *Battus polydamas* in Feb, suggesting some pre-emption effect; flowers such as *Elephantopus* and *Vernonia*, which had been covered with troidines in May 1981, were empty in 1982 there.] *Papilio torquatus* and *P. hectorides* were again out in strong spring broods by mid-August, almost a month early; a *Graphium telesilaus* ♀ was also seen on August 17, a month early. The usual spring flowers followed the same pattern, blooming one to two months early through December. The six resident Castniidae of Campinas (all univoltine and apparently feeding on a single species of terrestrial Bromeliad) also peaked very early (in Nov.), as did the coastal Castniidae (out in force in October). Perhaps this early peaking was fortunate, because heavy rains started in late November in Campinas and did not let up until after the end of the year, stopping all field work and cutting populations way down. RIO DE JANEIRO AND SÃO PAULO: A study project on the near-extinct *Parides ascanius* was carried forward from late 1981 through 1982, involving many trips to coastal swampy restinga habitats in Rio de Janeiro and São Paulo. Many new colonies were located in the former state, fortunately including at least two in the Poco das Antas Biological Reserve (surprisingly 40 km inland, 100 km NE of Rio, but still in riverine floodplain at sea level). *Aristolochia macroura* was verified as the only acceptable foodplant of this swallowtail (see paper on present status, biology and ecology of *ascanius* to appear in *Atala*, Vol. 10). In the course of searching out *ascanius* colonies, there was encountered a single ♀ of the much rarer Batesian mimic, *Graphium lysithous harrisianus* (f. *platydesma*), on April 8th near Barra de São Joao, RJ. This may be the last colony of this all but extinct and beautiful swallowtail. The work in coastal areas confirmed major differences in fauna between the similar coastal habitats of the states of Rio de Janeiro and São Paulo. Although *P. ascanius* was not located in any of the several dozen sites surveyed in the latter state, its foodplant was often abundant. The São Paulo restingas included many montane plants and animals as well as an abundance of unusual Riodininae: *Esthemopsis* (Caraguatatuba), and *Syrmatia*, *Lyropteryx*, *Menander*, and *Periplacis* (Ilha Comprida). *Danaus eresimus plexaure* was located on Feb. 7 by the Rio Quilombo near Santos. *Morpho anaxibia* was common along the São Paulo coast in April and May (as in 1981); this is two months later than it flies in Rio, or in the interior of São Paulo (Feb. 15 in Santa Rita de Passa Quatro, where a far-interior population of *Battus polystichtus* was also found). By way of contrast, *Morpho menelaus* was seen in Monjolinho (Campinas) on Feb. 2, two months before it appears in Rio de Janeiro! Both species of *Morpho* are very rare in the interior of São Paulo; and *M. catenarius athena* was not even seen in 1982, nor was *M. aega*, greatly reduced by the blooming and dying of all bamboos in 1980. AMAZONAS: Work on the "Minimum critical Size of Ecosystems" project in dense virgin forest 100 km north of Manaus, under ideal weather conditions in September, expanded the local list from 180 to 250 butterfly species; the list is now about half the total expected (excluding Hesperiididae). New records were mostly in the Theclinae and Riodininae (over 20 in the genus *Euselasia* alone). The project has identified butterfly species that are indicators of specific habitat types; such species promise to be helpful in evaluating changes in habitat during and after isolation of forest patches of different sizes (Satyrinae and Ithomiinae are currently being monitored). One week in September and two weeks in December were spent exploring the interior of Marajo island, at the mouth of the Amazon, with good weather in both cases. Local endemic forest species were discovered, confirmed, or mapped in Ithomiinae (very few), Heliconiini (many: manuscript in preparation describing several), Morphinae (all species, including *M. deidamia*, *M. adonis*, *M. rhetenor*, and *M. metellus*), Satyrinae (few), and Troidini (including an unusual dark subspecies of *Parides chabrias*).

ECUADOR: BD collected at several localities in July, including Lita (west of the Andes in Esmeraldas Province), and, on the eastern slopes of the Andes, in the area between Limon (Gral. Plaza G.) and Mendez (Morona Santiago Province) and along the road between Baños and Shell (Tungurahua Province). ESMERALDAS PROVINCE: The only locality new to BD this trip was the area near Lita (570 m elev.), a tiny farming community that is accessible only by autocarril (a bus, fitted with locomotive wheels, that runs on railroad tracks). Reliable travel in and out of this area is extremely difficult: to get one (partial) day of collecting required three long days of uncomfortable travel (round trip). Three hours of morning collecting under partly sunny skies at Lita (mixture of disturbed forest, crop fields, and pasture) netted 153 specimens representing 66 species (Hesperiididae - 10 sp., Heliconiini - 6 sp., Acraeinae - 1 sp., Pieridae - 5 sp., Satyridae - 5 sp., Riodininae - 5 sp., Theclinae - 3 sp., Nymphalinae - 12 sp., Brassolidae - 1 sp., and Ithomiinae - 18 sp.). On the afternoon of the same day (July 6), one hour (2 to 3 pm) of collecting at El Pacer (a spectacular and very wet cloud-forest area of 670 m elev., 25 km NW of Lita) under overcast skies, in thick fog and in a slight drizzle, yielded 14 specimens representing 10 species (3 sp. of Satyridae, 2 sp. of Riodininae, and 1 sp. each of Theclinae, Ithomiinae, Acraeinae, Papilionidae, and Hesperiididae). ELSEWHERE: Collecting between Mendez and Limon and between Baños and Shell was fair to poor in Mid-to-late July and no new or interesting finds were made (most butterflies taken were common, widespread species). Butterfly collecting between Rio Verde and Rio Topo (just upriver from Shell) was unusually poor (Isabel Velastegui, a resident commercial collector in Baños, confirmed that collecting along the Pastaza River had been poor all through June and July, and blamed this condition on the exceedingly heavy and frequent rains).

TRINIDAD, W.I.: JFP collected butterflies (and a few moths) from the end of September 1981 until mid-summer 1982. Lack of a pronounced dry season (normally December through April) in 1982 permitted good collecting during the entire 10-month period. About 400 different species representing approximately 60% of the known Trinidadian butterflies were collected, including some of the island's rare species, such as *Prepona omphale* Hbn, *Archaeoprepona meander* Cram, *A. demophon* Hbn, *A. demophon* Linn, *A. amphimachus* Fabr., *Eunica monima modesta* Cram, *Marpesia chiron* Fabr, *Hamadryas arethusa* Cram, *Metamorpha epaphus* Latr (Nymphalidae); *Eurema agave* Cram, *Leucidia exigua* Prittw (Pieridae); *Euptychia calpurnia* Fldr (Satyridae); *Ceratinia nise nise* Cram, *Pteronymia amandes* Kaye (Ithomiinae); *Eryphanis polyxena polyxena* Stich, *Opsiphanes cassiae cassiculus* Stich (Brassolidae); *Actinote antea* Jord (Acraeinae); *Philaethria dido* Clerck (Heliconiini); *Zeonia faunus* Fabr, *Helicopsis cupido* Linn, *Nymphidium onaeum* Hew, *Symmachia technema* Stich (Riodinidae);

Calycopis orchidia Hew, Atlides caranus Cram (Lycaenidae). A single male specimen of Cynea anthracinus luctatus Schaus was taken, which represents a new record for the island. Most of the common species of butterflies and skippers (list available from coordinator) showed a cyclical pattern of abundance, probably reflecting the emergence of multiple broods. A few species were regularly attracted to house lights at night, e.g., Caligo illioneus saltus Fruhs, Taygetis penelea Cram, and T. virgilia Cram. (Note: butterfly identifications were confirmed by resident entomologist and collector M. J. W. Cock). More than 20 species of moths in 19 genera were recorded by JFP (names available from coordinator).



ZONE 11 ONTARIO. Coordinator: Quimby Hess. Contributors: G. J. van Dorsser, Dr. W. J. D. Eberlie, William M. Edmonds, David H. Elder, Donald M. Fraser, Mark Goode, Wodek W. Gregory, Dana M. Gring, Forest Insect & Disease Survey (Canada), Barry Harrison, Quimby F. Hess, Tom Toyomi Ikeda, James Kamstra, Mike K. Matheson, Rod E. Parrott, Jack E. Pilkington, John Prideaux, Ron Ridout, Douglas E. Scovell, George Sutton, John P. Walas, A. (Bert) F. Wigg, Alan Wormington.

The 1982 Lepidoptera season in Ontario was notable for weather which was cool and wet in June and August, but more favourable in May and July. There was little influx of southern migrants into Ontario in comparison to many other seasons. Regular migratory species such as Danaus plexippus, Vanessa cardui, Vanessa atalanta and Junonia coenia were mostly in low numbers or absent in most areas usually reached in Ontario. Resident species such as Colias eurytheme, Polygonia interrogationis, P. comma, P. faunus, P. progne, Nymphalis vau-album J-album and N. antiopa, Aglais milberti and Basilarchia arthemis arthemis were absent or at low or very low population levels over most of their range in Ontario.

However, some butterfly species were noted to be at normal or slightly above normal population levels over their Ontario range. These included the following species: Poanes hobomok, Papilio polyxenes asterius, Pterourus glaucus glaucus, Pterourus troilus, Artogeia rapae, Euchloe ausonides, Euchloe olympia, Colias philodice, Harkenclenus titus, Incisalia augustus, Incisalia nippon, Everes comyntas, Everes amyntula, Celastrina ladon, Speyeria atlantis, Clossiana titania grandis, Basilarchia archippus, Enodia anthedon, Satyrodes eurydice, Megisto cymela, Coenonympha inornata, Cercyonis pegala, Oeneis macounii and Oeneis jutta.

Certain species of butterflies were encountered in new localities and districts as follows: Poanes massasoit in Lambton County (near Port Franks), Papilio machaon hudsonianus in the Cochrane District (Moosonee), Epidemia dorcas in Lambton County (Kettle Point, Port Franks), Erora laeta in the Parry Sound District (sight record), Everes amyntula in the Temiskaming District (Normick Plant near Kenogami), Speyeria cybele (probably krautwurmi) in the Cochrane District (Matheson), Clossiana frigga saga in the Rainy River District (Atikokan), Clossiana freija in the Rainy River District (Atikokan), Basilarchia archippus in the Rainy River District (Harris Hill) and the Cochrane District (Remi Lake), Libytheana bachmanii in Bruce County (Inverhuron), Satyrodes eurydice in the Cochrane District (Iroquois Falls), Megisto cymela in the Temiskaming District (10 km. north of New Liskeard), Coenonympha inornata in Bruce County (west of Hanover) and Waterloo County (west of New Dundee), and Cercyonis pegala in the Cochrane District (north-west of Matheson).

A number of butterfly species were not encountered in Ontario in 1982 of which a few are worth noting here: Pontia protodice, Pontia occidentalis and Incisalia irus. Irus now may be extinct in Ontario.

Lycaeides melissa samuelis was encountered in its two Ontario localities, i.e. the St. Williams Forest Nursery area in Norfolk County and the Yogi Bear locality of the Pinery in Lambton County. The population at the St. Williams locality seems to be quite low. However, the Yogi Bear locality seems to have a population level similar to 1981. But it must be noted that the Karner Blue in Ontario could become extinct in the near future if its very local habitat and foodplant situation is reduced below a viable level by man's activities or natural causes, a situation which needs to be addressed as soon as possible. The necessary research to set up a protective program will be found in the Toronto Entomologists Association Occasional Publications of recent years. Complete details for 1982 will be found in TEA Publication #14-83, available from Alan J. Hanks, 34 Seaton Dr, Aurora, Ontario L4G 2K1, Canada.



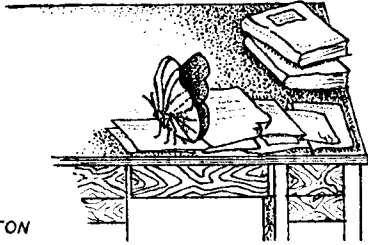
ZONE 12 PACIFIC ISLANDS (HAWAII). Interim coordinator: R. L. Langston (RL). Contributors: D. L. Eiler (ED), D. Heisinger (DH) and V. P. Lucas (VL). No reports from residents of the Hawaiian Islands or the Indo-Australian Region for 1982. Visitors to Hawaii from Indiana, California and Ohio (respectively) reported what they found, but most were "expected" (with only one possible NEW ISLAND record). The insect fauna of Hawaii has its closest affinities with the islands of the South Pacific, Australia, New Guinea, etc. Therefore as of the 1980 Summary Hawaii was removed from Zone 1 and North America in general.

MOTHS: The endemic noctuid Scoterythra rara was common, plus the introduced geometrid Cosymbia serrulata, Miloli Rd. near Kokee State Park, Kauai, 27 June (DE).

BUTTERFLIES: Erionota thrax, inside grocery store, Kapaau, Hawaii, 15 June (DE). Hylephila phyleus, South Point, 13 June, Kapaau, Kokee Beach & W. of Hawi, 15 June, all on Hawaii (DE); two locales on Oahu, 4,5 July (DE); & near Kahuku/Laie, Oahu 30 Aug. (Mr. & Mrs. T. Curto via VL). Papilio xuthus, Hilo, 11 June, Polulu Valley Lookout, 15 June, both Hawaii, Waianapanapa Park, Maui, 21 June; windward & leeward sides of Oahu, 30 June-5 July (all DE); & near Napili Shores, Maui, 4 Sept. (TC via VL). Pieris rapae, sightings & specimens at several localities on Hawaii, Maui, Kauai & Oahu, mid-June to early July (DE). Strymon bazochii, lookout W. of Honokohau, Maui, 22 June; Kilauea Point, Kauai, 28 June & rd. to Mililani Park, Oahu, 5 July (all DE); near Napili Shores, Maui, 4 Sept. (TC via VL). Brephidium exilis, Salt Pond Beach Park, KAUAI -- NEW ISLAND, 20 May (DH) [Original discovery for Hawaii was in June, 1978 on Oahu--RL]; also near W. end of town of Mokuleia, Oahu, 5 July, on alfalfa blossoms (DE). Vega blackburni, Hosmer Grove, Haleakala Nat. Park, Maui, 20 June (DE); Pihea Trail & Kokee State Park, Kauai, 27 June (DE). Lampides boeticus, below Poipu Beach, Kauai, 20 May (DH); 6 locations, both sides of Hawaii, mid-June, 4 on Maui, 19,21 June & 3 on Oahu, early July (DE); near Napili Shores, Maui, 4 Sept. (TC via VL). Agraulis vanillae, sightings & specimens taken at several localities on Hawaii, Maui, Kauai & Oahu, mid-June to early July (DE); near Kahuku/Laie, Oahu, 30 Aug. (TC via VL). Vanessa tameamea sighted, Akaka Falls State Park, 11 mi. N. of Hilo, Hawaii, 14 June (DE) [Confirmed, as 5 fresh here on 29 Jan. 1983--RL]. Danaus plexippus (a non-migrating species in Hawaii) found near Napili Shores, Maui, 4 Sept., but no albinos noted (Mr. & Mrs. T. Curto via V. Lucas). D. Eiler reported normal orange adults on Hawaii, Maui, Kauai & Oahu. However, only 3 sightings of the ablinic form--near Ocean View Coffee Shop, Hwy. 11, Hawaii, 17 June; Hwy 83 near rd. to Sacred Falls, 4 July & near W. end of Mokuleia, 5 July, both Oahu (DE).

From The Editor's Desk

JUNE PRESTON



The Buy, Sell, Exchange column of this Newsletter is a very important and integral part of it. However, some of the ads that cross my desk for inclusion in the NEWS are practically illegible and some are much too long. The Editorial Board informs me that the Society does not own a handwriting machine to read and interpret illegible ads, so until this job can be done by electronic means, please help the people currently employed at this task by neatly printing or typing your ads. Try to check the spelling of scientific names also or you may end up offering or requesting the wrong thing. Please try to keep your ads short and to the point. They should have fewer than 100 words or they will have to be edited or returned for rewriting. Any errors should be reported immediately so the corrected ad can be run in the next issue as if the erroneous one had not been printed.

Dave Winter has done a stupendous job as the NEWS editor for the past 3 years. His last issue was the Sept/Oct 1982 one. Now he deserves a much earned rest and a chance to resume work with his moths, so please don't send him any more material for inclusion in the NEWS. Items for the Ripples column should be sent directly to Jo Brewer and all other material should come to me. Anything coming via Dave is quite likely to miss the deadline and not get into the issue for which it was intended. The deadlines printed on the back cover of the NEWS are important. Please pay attention to them if you want your ad to appear in a specific issue.

The exchange of endangered or threatened species is governed by the 1973 Endangered Species Act. This is a complex of federal regulations that put requirements on both the offerer and receiver of specimens. It is hoped that the NEWS can have an informative condensation of these regulations as they apply to lepidoptera in the near future. Anyone who wishes a complete explanation of the Endangered Species Act may write to the Federal Wildlife Permit Office, Fish and Wildlife Service, U.S. Dept. of the Interior, Wash. D.C. 20204. Request circular FWSF-006 for information on importing and exporting species. Request circulars 50CFR 17, 50CFR 17.11 and 17.12 for information about U.S. species. FWSF-010 contains pertinent facts and P.L. 93-205 (87 Stat. 884) is the 1973 Act as amended to Dec. 1978. There is no charge for these publications.



NEW FOODPLANT (Cordyline indivisa:Liliaceae) OF THE SADDLEBACK CATERPILLAR, Sibine stimulea (Clemens)

From September 5 to 21, 1982 I raised two saddleback caterpillars on the greenhouse plant, Cordyline indivisa, a surprising foodplant in light of John Henry Comstock's statement that "the larva feeds on oaks and other forest trees" (An Introduction to Entomology, p. 609). On September 8th, another saddleback larva was found, but it also refused to eat oak leaves. It preferred the rough, grass-like Cordyline of the lily family, voraciously devouring its leaves.

These green larvae, with dark brown saddles on their backs, are not uncommon in Indiana. The Indiana Department of Natural Resources has reported them on several occasions. The adult moth is locally but widely distributed throughout the state. W. J. Holland, The Moth Book, portrays a good picture of the larva on Plate 1, Fig. 6, and of the imago on Plate XLVII, No. 9. Avoid handling the larva because of its stinging setae.

G. F. Hampson, The Moths of India, describes the cocoon as being hard and compact, round or oval in shape and having an escape lid for emergence of the imago (Vol. 1, Fig. 252, p. 371). Although there is some question as to which family of Lepidoptera this species belongs, Hampson and the Entomological Society of America place it in Limacodidae. Holland places it in Cochliidiidae and Comstock in Eucleidae. Personally, I prefer placing it in the Limacodidae family.

I am indebted to Berni Ferringer, florist of the Manchester Greenhouses, for showing me Cordyline plants and the beautifully illustrated book entitled Exotica: Picture Cyclopedia of Indoor Plants; to Dr. Philip Orphurt, Chairman of the Biology Department of Manchester College, for confirming the identification of the foodplant; and to Dr. Emerson Niswander, Professor Emeritus of Entomology at Manchester College, for giving me the first two larvae and checking my identification of the saddleback caterpillar.

Ernest M. Shull (Prof.)



A THOUSAND HEMILEUCA IN ONE NIGHT!

I know there will be an outcry of gross over collecting and other words about greed. The truth of the matter lies in the full name of this particular bug. Hemileuca oliviae, the New Mexico Range Caterpillar.

I have been, for several years, trying to work in a fall collecting trip to look for the H. oliviae, and this year, 1982 was the time.

Information on the current outbreak was obtained from Mr. John Chappell, Extension Agent of the Bernalillo County Department of Agriculture in Albuquerque. He had received reports of an extensive infestation in Tarrant County, 10 miles southeast of Duran, New Mexico.

On Sunday morning November 7, 1982, my wife Joan and I drove the 90 miles to the area suggested. We had driven approximately seven miles S.E. of Duran when we spotted our first adult. It was around 14:00. We stopped and started our hunt. We had collected three ♂s and one ♀ when a large flock of sheep, two sheep herders on horseback and two in pickups were spotted headed in our direction.

We had not obtained permission to be on the property; so, I thought I had better talk to one of the men. The men, as it turned out, were the sons of the ranch owner, Mr. Shafie Hindi. I explained to one of the men what I was looking for and he directed me to their headquarters, three miles down the road. Mr. S. Hindi and his brother were more than willing to show us the greatest concentration of moths. We followed him for about one mile south, then he stopped his pickup and came back to talk. He showed us how the grass land turned to practically barren desert. His grass land is disappearing at about two miles in each direction from the main concentration of H. oliviae each year. We continued on for two more miles in very sparse grass and stopped. Mr. Hindi explained that the infestation extended about five to ten miles south and east of that location, but we would surely be able to collect several specimens. He showed us egg rings on the fence wire, fence posts, and several weeds the oliviae don't eat. There were literally thousands and thousands of egg rings in the 1/8 of a square mile we examined. On every blade of remaining grass and weed were anywhere

from three to eight adult moths setting. It was around 16:30 when Mr. Hindi returned to his headquarters, leaving us to our evening of black lighting. We were down on our knees collecting a few egg rings and unhatched pupa when Joan cried out "look". We were seeing the ground raise up like a mist. The air from ground level to about three feet was filled with moths. There was such a great concentration, I couldn't believe my eyes. We observed females with clusters of eight to ten males trying to copulate. It is impossible to truly describe the sight. In every direction, as far as we could see the air was filled with moths.

Mr. Hindi had told us that the past summer a caterpillar count, by the agriculture people, had been 300+ caterpillars per square yard!

We set up our black light trap at dark and by 23:00 we had collected over one thousand adults (count verified the following week). Male to female ratio was 3.4 to 1.

The next morning we measured off an area 10 ft. x 10 ft. and made our own survey. We collected 13 ♂s, 5 ♀s, 9 egg rings and 22 unhatched cocoons. Our survey showed that only ½ the cocoons had hatched; total count of cocoons hatched and unhatched 44.

Pesticide spraying had been discontinued in the area on and around Mr. Hindi's ranch, due to the cost. With the Federal and State governments paying 2/3 of the expense, it would still cost the area ranchers over \$25,000.00 each.

The state of New Mexico has commissioned a research laboratory to pursue the development of a pheromone, but to date their efforts have been hampered by several very complex components that elude chemical breakdown. Dr. John Owens of the New Mexico State University at Las Cruces feels that a pheromone will be the eventual answer to the state's H. oliviae problem, but at the infestation's rate of spread, it can be none too soon in coming.

There is the possibility of a parasitic wasp being imported and bred to attack the Hemileucas, but the expense of this program would be quite large, and could possibly open a Pandora's box of additional problems.

Anyone having a plausible solution to this problem, please forward their suggestions to Dr. John Owens.

Jimmie Coleman
Albuquerque, New Mexico



Research Notices

● WANTED: Living or recently dead specimens of primitive Lepidoptera for research on spermatozoa. Field-caught males or females or any rearable stage of Zeugloptera (Micropterygidae), Dacnonypha (e.g. Eriocraniidae), Exoporia (e.g. Hepialidae), and Monotrysis (e.g. Nepticulidae, Incurvariidae) would be very much appreciated. Send best way (will at least pay postage) or consult with Dr. Julian Shepherd, Dept. of Biological Sciences, State University of New York, Binghamton, NY 13901, tel: 607-798-6538 (reverse charges).

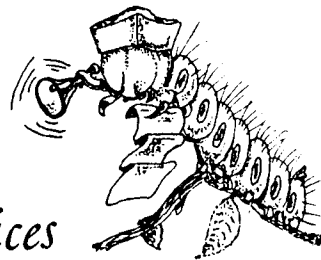
● I would like to obtain live ova of Ceratonia catalpae, the Catalpa Sphinx, for experiments on the chemistry of plant utilization in this species. I need to rear large numbers of larvae, thus any help will be appreciated. Please let me know if there is a possibility you will be able to send me eggs this summer. Thank you. Deane Bowers, Museum of Comparative Zoology, Harvard University, Cambridge, Mass. 02138.

● I may have to scrap my free Sesiidae pheromone program (see Jan/Feb 1981 NEWS, pg 8) for lack of forwarded specimens. If you caught anything interesting with the pheromone, PLEASE WRITE. Chances are I won't want much. Last year's output was nil and a lot of time, effort and money was spent. It is now up to those of you who were given the free pheromone to respond. You can phone me in the evenings at (312) 237-0543. Dr. John Holoyda, 2819 N. Marmona Ave, Chicago, ILL 60634 USA.

● Seek eggs or gravid females of following moth species for studies of larval host preferences and feeding behavior: Paonias excaecatus (Sphingidae), Heterocampa guttivitta, H. biundata (Notodontidae), Orthosia hibisci, O. revicta, any other Orthosia spp. (Noctuidae). Can pay postage/shipping and will negotiate fee on viable egg basis. Jack C. Shultz, Department of Biology, Dartmouth College, Hanover, N.H. 93755. Phone: 603-646-2144.

● RESEARCH FUND ESTABLISHED. The dept. of Entomology, American Museum of Natural History has established a Theclid Research Fund. One purpose of this fund will be to increase AMNH holdings in the group generally called Thecla Fabricius from the Neotropics. Priorities for purchasing any available specimens, or exchanging for same, include Central and South American and Antillean Cyanophrys sens. lat., Andean "elfins" (culminicola Group of Thecla in Seitz) and thereafter all Neotropical Theclines, particularly unidentified material. If such are available for sale or trade please write Dr. Kurt Johnson, Theclid Research Fund, Dept. of Entomology, American Museum of Natural History, Central Park W. at 79th St., New York, New York 10024.

● I would like any records since 1965 of the following from Philadelphia, Pa.: Euphyes bimacula, Incisalia henrici, Aglais milberti; and Satyroides eurydice from the Morris Arboretum. Investigating the extirpation of the type colonies. Thomas S. Williams, 2366 Rosemore Ave., Glenside, PA 19038



Notices

1983 ANNUAL MEETING DOOR PRIZES

Please note! Anyone who wishes to donate a door prize for the drawing at the Annual Meeting in Columbus, Ohio, July 7-10, please contact Charlie Covell, Dept. of Biology, Univ. of Louisville, Louisville, KY 40292, USA. Prizes may be sent, or brought to the meeting. Thank you. -CVC

I.C.Z.N.

Opinions have been published by the International Commission on Zoological Nomenclature in the Bulletin of Zoological Nomenclature, vol. 39, part 4 on Dec 7, 1982. Of interest to lepidopterists is the following:

Opinion No. 1227 (p. 233)

Tinea bjerkanrella Thunberg, 1784 and Phalaena (Noctua) cardui Hüber, 1790 (Insecta, Lepidoptera): conserved.

MEMOIR #2: IMPORTANT NOTICE

Anyone who ordered and prepaid for Memoirs of the Lepid. Soc. #2 through the Treasurer or directly from Charlie Covell, but who has not received his or her copy, please write to Covell directly with particulars as to whether hardbound or paperback issue was ordered. He will fill the order promptly. Address: Dept. of Biology, Univ. of Louisville, Louisville, KY 40292, USA.

SEASON SUMMARY COMMENTS!

Dave Winter is still summarizing comments on the improvement of the Season Summary from the membership (see pg 52, July/Aug 1982 and pg 62 Sept/Oct 1982). He needs your feedback before the Executive Council meeting in July. If you have not already done so, jot down your ideas on what you think the Summary should accomplish and ways in which it might be changed. Send them to Dave immediately at 257 Common St., Dedham, MASS 02026.

1983 PACIFIC SLOPE SECTION ANNUAL MEETING

The Pacific Slope meeting will be held Aug 26-28 at Camp Inyo, Big Pine (Inyo County), California, in the heart of the Owens Valley, nestled between the highest and lowest points of the conterminous United States. There should be good collecting for both butterflies and moths. Also being investigated is a special field trip to the Ancient Bristlecone Pine Forest in the White Mtns. The meeting site is rustic with bunkhouse lodging, but it is cheap and informal. Complete details and a call for papers will be mailed to all Western members of the Lepidopterists' Society. All others interested in attending (the public is invited) should contact Julian Donahue, Natural History Museum, 900 Exposition Blvd, Los Angeles, Calif 90007, phone (213) 744-3364, to be placed on the mailing list for further information.

XVII INTERNATIONAL CONGRESS OF ENTOMOLOGY

The XVIIth International Congress of Entomology will be held in Hamburg, Germany August 20-26, 1984. All languages can be used but English will be preferred. Interested persons should write for information on program and registration to:
The Secretary, 17th International Congress of Entomology, Zoologisches Institut der Universität, Abt. Angewandte Ökologie/Küstenforschung-Biologiezentrum, Olshausenstrasse 40/60, D-2300 Kiel 1, Germany.

THAILAND, ANYONE?

Mr. Adam Cotton wishes to provide the following services to collectors and lepidopterists who may wish to spend time collecting or studying in Thailand. Mr. Cotton is a young English lepidopterist fluent in the Thai language, living in Bangkok, who will offer his single spare room as FREE accommodation in that city (hotels are not very cheap) to members of the Lepidopterists' Society. He will also take people on collecting trips to localities up country on condition that the costs of his accommodations, food, travel expenses, etc. are paid for him on said collecting trips. In return he will act as guide to good collecting spots and assist in ensuring that expenses are kept to a minimum. Three months advance notice is requested for booking his spare room. One month's notice requested if his services as a guide only are desired. Mr. Cotton specializes in world Papilionidae and visitors are welcome to view his large collection and library. For further information, advice or booking, write to Adam M. Cotton, 38/1 Soi Saeng Chan, Sukhumvit 40, Bangkok 11, Thailand.

THE OHIO LEPIDOPTERISTS

This organization of about 130 members is now entering its fifth year. Formed in 1979 to permit lepidopterists from Ohio to get together it now has members from all over the U.S. Membership services include: a quarterly newsletter; sales of pins, envelopes and selected publications at competitive prices; a publication series in cooperation with The Ohio Biological Survey; plus two meetings and several field trips per year. Dues are \$5.00 (\$3.00 student) a year.

The Ohio Lepidopterists are proud to be the hosts of the 34th Annual Meeting of the Lepidopterists' Society, 7-10 July, 1983.

34th ANNUAL MEETING REMINDER

The meeting runs Thursday through Sunday, 7-10 July, 1983 in Columbus, Ohio. Pre-registration for the meeting is very important.

Interested persons should send in their name and address now in order to ensure that they receive registration materials. Send name and address to:

LEPIDOPTERISTS' SOCIETY 34th ANNUAL MEETING
Ohio Biological Survey
484 W. 12th Avenue
Columbus, Ohio 43210

Persons who did not receive an Announcement and Call for Papers should request one from the address above. The deadline for submission of contributed papers is April 1, 1983. The application should include an abstract not to exceed 250 words. For more information, call the Ohio Biological Survey (614) 422-9645.

A host of ancillary activities are being planned, including a National Lepidoptera Photographic Salon, a Thematic Philatelic Exhibition, visits to the Ohio State Univ. and Ohio Historical Society insect collections, field trips, etc., etc.

IX LATIN AMERICAN CONGRESS OF ZOOLOGY AND II SYMPOSIUM ON NEOTROPICAL LEPIDOPTEROLOGY

The II symposium on Neotropical Lepidopterozoology will be held in conjunction with the IX Latin American Congress of Zoology from Oct 9 to Oct 15, 1983 in Arequipa, Peru. The central subject of the symposium will be "The Andean Lepidoptera." Ten invited speakers are expected and the program will include conferences on several aspects of the systematics, ecology, biogeography and physiology of Andean Lepidoptera. Field trips of about 1 week each are planned for both before and after the Congress for a limited number of participants. One excursion would be to Cusco, Machu Picchu and the Tambopato Nature Reserve (Madre de Dios) and the other to Iquitos (Loreto) and Tingo Maria (Huánuco). Registration fees are U.S. \$60.00 before May 31, 1983 and U.S. \$75.00 after that date. For information on the Congress and Symposium, airline tickets, hotel reservations, field trips, etc., write to Dr. Gerardo Lamas, Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Apdo 11434, Lima-14, Peru (Telex: 20416 PE SAFARI) or to Dr. Pedro G. Aguilar, Sociedad Entomológica del Perú, Apdo 4796, Lima-100, Peru.

JOURNAL UPDATE

The latest issue of the Journal of the Lepidopterists' Society, Vol. 36, No. 4 was mailed to members in mid March, 1983.



Buy Sell Exchange

Items submitted for inclusion in this section are dealt with in the manner set forth on page 10 of the Jan/Feb 1983 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. Items will be accepted from members only and will be printed only once unless entry in two (maximum) successive issues is requested. 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.



EXCHANGE: Swedish butterflies; available for North American ones. George Kisch, Ponnygatan 4A, 431-32, Mölndal, SWEDEN.

WANTED: To exchange identified, completely labeled spread butterflies from N. America, N. of Mexico for papered or spread completely labeled and identified butterflies from same area. Exchange only at Columbus, Ohio Lep. Soc. Meeting in July. Desire to arrange exchange in advance. Send SASE for desiderata and long offerta list. Many choice specimens. Floyd and June Preston, 832 Sunset Dr, Lawrence, KS 66044.

FOR SALE: Canadian & Canadian Arctic butterflies, including P. kahli, P. dodj, O. excubitor, B. distincta, E. mckinleyensis, E. sp. nova, and many choice Erebia, Colias, Boloria, oeneis, etc. A-1 condition guaranteed. Jim Troubridge, RR3, Caledonia, Ontario, CANADA NOA 1A0 for list.

FOR SALE: 2 24-drawer California Academy of Sciences insect cabinets (white), without drawers. Formica finish with locking handles and Masonite finish with no locking handles. Shipping charges extra. Glenn A. Gorelick, Citrus College (Biology), Azusa, CA 91702.

WANTED: Pupae and cocoons, buy or trade, small lots of: Samia cynthia, Actias selene, Actias luna, Celario lineata, Pachysphinx modesta, Ceratomia amyntor, Eacles imperialis, Eupackardia calleta, Citheronia regalis and Calasymphobus myops. Also any Rothschildia ssp. Philip A. Johnson, 26 Great Plain Terrace, Needham, MASS 02192.

EXCHANGE ONLY: Speyeria diana flawless ex ovo pairs, for rarer Neotropic Papilionidae, theclinae, Nemeobiidae, esp. P. ornythion dark, P. thersites, P. ascolius, Evenus gabriela & regalis. SASE, please. Irving L. Finkelstein, 425 Springdale Drive NE, Atlanta, GA 30305.

FOR SALE OR EXCHANGE: Cocoons of A. luna and A. polyphemus. James Mouw, 245 Sarah Ave, Iowa Falls, Iowa 50126.

FOR SALE OR TRADE: Wild collected ova of Hemileuca electra electra and H. nevadensis. Will trade for other Saturniidae. Lawrence H. Shaw, 17171 Bolsa Chica Ave #130, Huntington Beach, Calif. 92649.

FOR SALE: Cocoons of A. luna, A. polyphemus and H. cecropia. Also ova of A. io, A. luna, A. polyphemus, H. cecropia, H. gloveri, and E. imperialis beginning the third or fourth week of May. SASE for list. Carita Hamblyn Bates, P.O. Box 3133 Eldorado Springs, Colo. 80025.

FOR SALE OR EXCHANGE: Pupae, ova, larvae of Euphydryas phaeton (The Baltimore), host plant Chelon glabra (Turtlehead) and Catocala fraxina (The Blue Underwing). SASE Donald Hepperle, 969 Pine Ave, Castle Shannon, Pittsburgh, PA 15234.

FOR SALE: Cocoons of Samia cynthia. Doss Heath, 911 Timmons Dr, Tuscola, Ill. 61953.

FOR TRADE: this summer ova available of the following macroheterocera: Hyalophora cecropia, H. gloveri, H. columbia, C. promethia, A. pernyi, A. polyphemus; will also trade limited numbers of H. columbia, or will buy living pupae. Wanted are all Hemileuca ssp., all Rothschildi ssp, all Citheronia ssp, most Automeris ssp, Callosamia angulifera, Eupackardia calleta, Hyalophora euryalis (rubra), Samia (Philosamia) cynthia, some Sphingidae, many Actias and Antheraea ssp, all Attacus ssp and most foreign ssp. Not all trades on one to one basis. SASE for details. Dennis E. Walker, 1441 So. 18th Ave, Maywood, Ill. 60153, U.S.A.

WANTED: the following Nearctic notodontids and lymantriids; Any Cerura, Harpypia, Nagidusa, Ichthyura and Lophopteryx americana, Odontosis elegans, Hyperaeschra stragula, Hyperaeschra georgica, Notodonta basitriens and Phoesia portlandidi. Will purchase or exchange, offerta list on request. Glenn A. Gorelick, Citrus College Biology Dept, 18824 Foothill Blvd, Azusa, Calif. 91702.

EXCHANGE: A few very nice pairs of Neophasia terlootii. Am intereted in subspecies of P. indra, P. machaon, P. brevicauda, P. oregonius. Also Speyeria diana, Boloria, Oeneis and other northern material. Send SASE and offerta for each pair. Peter J. Heles III, 628 Westover, Richardson, Texas 75080.

FOR SALE: The Lepidoptera of Pennsylvania by Harrison M. Tietz, 1952, Penn State College Agr. Exp. Station, 193 pages. Fewer than 100 copies left. Cover price is \$3.00. We are selling it for \$2.00 (post paid). Respond to: The Ohio Lepidopterists, c/o Eric H. Metzler, 1241 Kildale Sq. N., Columbus, Ohio 43229.

MEMBERS' COMMERCIAL NOTICES....

W. B. RICHFIELD, International Specimen Supply, P.O. Box 1066, Goleta, CA 93116, USA: selling all families of world Lepidoptera and other insects by mail-order; quality papered specimens with data. Send \$3 for introductory additive specimen price lists, 12-issue subscription.

ADAM M. COTTON, 38/1 Soi Saeng Chan, Sukhumvit 40, Bangkok 11, Thailand: Selling butterflies, beetles and other insects from Thailand. Most butterflies with data. Write for free price list; all letters answered.

WIDAGO, Jln: Pahlawan 35, Padang Panjang, West Sumatra, Indonesia. Large selection of West Sumatran butterflies and beetles for sale. For collectors, museums, etc. with data. Also cicadas, scorpions, sphinx moths.

MARIO ROJAS VILLEGAS, Apdo 119, Tingo Maria, Peru. We sell best quality butterflies of all families with best prices. A-1 quality Morpho, Papilio, Prepona, Agrias and small and large Nymphalidae. Also Coleoptera, especially medium and small sizes with best prices. Please send your needs, orders and advancements.

MIGUEL PANDURO COBOS, Apdo 271, Pucallpa, Peru. We offer all kinds of insects of best quality. Butterflies of all families in mixed lots, not individuals. Large Coleoptera in various states of preservation. Cicadas, Lantern Flies, Mantidae and others. Best prices in mixed lots. Will receive orders and advancements.

S.C. LIN, P.O. Box 9-296, Taipei, Taiwan, R.O.C. Selling Formosan butterflies, beetles and assorted insects in large quantities.

MRS. CHANG PI-TZU, P.O. Box 873, Taipei, Taiwan (Formosa), Republic of China: selling Formosan butterflies, moths, beetles and other insects; sexual mosaics, aberrations and rare butterflies including one gynandromorph of Actias sinensis; ova of Attacus atlas from May 1983.



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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 15th of January.

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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 the full dues for the current year (\$18.00 US), together with mailing address and a note about areas of interest in the Lepidoptera; student membership (must be certified) \$12; sustaining membership \$25. 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 list will comprise the last issue of the NEWS in even-numbered years.

Information on membership must be obtained from the TREASURER, Ron Leuschner, 1900 John St., Manhattan Beach, CA 90266, USA. Changes of address must be sent to the TREASURER, and only when the changes are permanent or long-term.

Other information about the Society may be obtained from the SECRETARY, Julian P. Donahue, Natural History Museum of Los Angeles County, 900 Exposition Blvd., Los Angeles, CA 90007, USA. Please notify him of any additions or changes in areas of interest for publication in the membership list.

Manuscripts submitted for publication in the JOURNAL are to be sent to the JOURNAL EDITOR, Dr. Thomas D. Eichlin, JOURNAL of the Lepidopterists' Society, Insect Taxonomy Laboratory, 1220 N. Street, Sacramento, CA 95814, 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.....

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. Order from Ron Leuschner, Treasurer, 1900 John Street, Manhattan Beach, CA 90266, USA.

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. Order from Ron Leuschner, Treasurer, address above.

BACK ISSUES of the JOURNAL and of the NEWS of the Lepidopterists' Society: order from Ron Leuschner, Treasurer, address above. A list of the available issues and their cost, postpaid, is in the NEWS for Jan/Feb 1983, page 6.