



NEWS

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BROOKS RANGE FIELD TRIP IS THE ONE

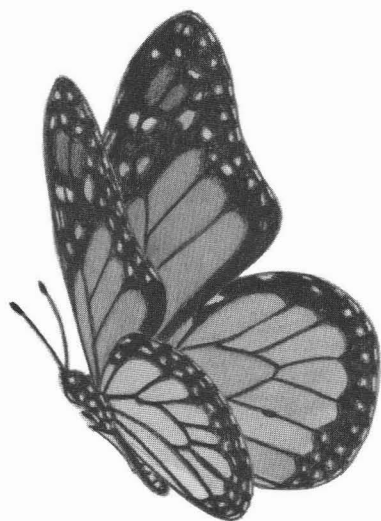
For more complete information see page 2

ALSO

IN THIS ISSUE

THE ANNUAL
FIELD SUMMARY

BUTTERFLY BALL



In mid-September I was at the Lake Ontario Shore east of Ajax. It was a warm morning with a mist rising off the lake. There was practically no wind. A great congregation of Monarch butterflies lifted from their overnight roosts and slowly formed a huge tumbling ball of butterflies about the size of a ten acre field. This enormous mass gathered itself into a tight swarm about 100 feet across and started out south across Lake Ontario some thirty feet above the surface of the water. The annual migration was underway.

Norman Tremblay
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SUGGESTED EQUIPMENT
FOR BROOKS RANGE ADVENTURE

BOOTS. Tundra collecting can require crossing soggy areas, although the best collecting is usually in drier spots. Unless you don't mind wet feet, bring boots that are water-proof at least up over the foot (I use L.L.Bean Hunting Shoes myself) but that can be used also on rocky terrain.

CLOTHING. If you are out collecting you can assume the temperature will be between 40 and 75° F - but you can have strong wind and sudden rain. You must be able to stay warm at 40° in wind and rain. It could get down into the 20's, but in that case people will not be collecting, but sitting in their tents (and maybe in their sleeping bags) trying to keep warm. Pick your sleeping bag appropriately.

HEAD NETS. These are not required unless you are particularly disturbed by thick clouds of mosquitoes. A good repellent (available in Fairbanks by the gallon!) will work wonders, and your butterfly net makes a fine emergency head net. I tried collecting once in a head net, and found it difficult. Sensitive people might prefer to wear a net while eating lunch or while walking if not collecting.

THE VEHICLE CHARGE of \$30 per person is for the week, not per day. If enough people sign up that we need a bus rather than a couple of vans that charge may change - if so I'll let you know in March.

FOOD COSTS. These will in general run 1½ to 2 times the cost for comparable meals in the lower 48'. Be prepared.

TENTS. Field trip participants must bring them. One cannot rent tents in Fairbanks. Small mountain-type two man tents will do, and they need not be the expensive ultra-light kind. Remember that there are no trees in the tundra, and tents should not collapse in strong winds.

I propose starting up the haul road on 4 July (assuming one day is enough time after the Eagle Summit trip to get organized). I suggest no field trip participant make return plane reservations earlier than 12 July, which gives us almost 6 days of collecting (or 3 good days if the weather is about average).

For registration form see the NEWS of Nov/Dec 1978 (page 19). For further information write to Kenelm W. Philip, Research Associate, Institute of Arctic Biology, University of Alaska, Fairbanks, Alaska 99701.

CLIMATE. June days in Fairbanks are usually partly cloudy with moderate temperatures. Average temperature in June is 59° F, average maximum 70° F, average minimum 47° F. Highest recorded temperature was 96° F and the lowest was 37° F. Average precipitation for the month is 1.39 inches. During the period of the meeting, the sun will set around 1:00 a.m. and rise again about 2:00 a.m. It will not be completely dark at any time during the meeting.

CURRENCY AND IMMIGRATION. Be aware of the exchange rate when traveling through Canada. The rate of exchange varies daily but is currently around 14% (\$1.00 U.S. = \$1.14 Canadian). The banks give full exchange rate, but various businesses give lower rates to no exchange at all.

AIR TRANSPORTATION. Fairbanks International Airport is served by Wien Air Alaska, Alaska Airlines and Northwest Orient. Alaska Airlines provides two nonstop flights daily from Seattle and Northwest Orient makes one similar nonstop flight from Seattle. Western Airlines provides service from the west coast to Anchorage and Northwest Orient provides air transportation from the east coast to Anchorage. Wien Air Alaska makes 4 to 5 flights daily from Anchorage to Fairbanks and Alaska Airlines operates five daily flights from Anchorage to Fairbanks. Shuttle service will be provided from the airport to the campus. Taxi arrangements for those staying in downtown hotels will have to be made as necessary. Taxi fare from the airport to the downtown area is about \$7.00. We recommend cab sharing. Numerous car rental firms are available at the airport. NOTE: Schedules and rates listed above are as of December 1978 and may change.

DATES FOR THE MEETING ARE 28 JUNE - 1 JULY 1979. FIELD TRIPS WILL FOLLOW THE MEETING.

Owing to the late arrival of the reports from Zones 2 & 9, these two zones do not appear in the proper order. They will be found on page 17.

ZONE 1: SOUTHWEST: ARIZONA, NEVADA, CALIFORNIA. Coordinator: R.L. Langston (RL). Contributors: G.T. Austin (GA), R.A. Ballowitz (RAB), J.P. Brock (JPB), J.W. Brown (JWB), K. Davenport (KD), S.K. Dvorak (SD), J.F. Emmel (JE), D.K. Faulkner (DKF), C.D. Ferris (CDF), M.W. Grocoff (MG), H.F. Koopmann (HK), R.H. Leuschner (RHL), S.O. Mattoon (SM), J.R. Mori (JM), C.A. Sekerman (CS), A.M. Shapiro (AS), O. Shields (OS), M.J. Smith (MS), P. Spade (PS), F.T. Thorne (FT) & R.E. Wells (RW).

COUNTY, STATE (in caps.) = New county, state records. NORTH, SOUTH, etc. = Northerly, Southerly, etc. range extensions.

ARIZONA: Extremely warm weather of late 1977 persisted into early 1978 with *Phoebis sennae* & *Eurema proterpia* still flying in Jan. in Santa Cruz Co. (RAB). Twenty species along Sonoita Creek on 22 Jan., with adults of many species thru the winter (RAB). Drought conditions in Cochise Co. in early July with few nectar sources below 7500' (CDF). Summer rains came and fizzled with Aug. practically dry (RAB). Heavy autumn rains in Cochise Co. gave rise to early Nov. flights of many species including *Atalides haesus corcorani* & *Precis coenia* (CDF). Season ended abruptly in early Dec. with freezing--two days in Nogales BELOW ZERO--first time recorded (RAB).

MIGRATORY SPECIES: Late summer flowers poor, with the normally plentiful influx minimal in some species and others not even observed (RAB). No Mexican migrants recorded in Nov. in Cochise or Graham Counties, but *Cynthia cardui* present near Portal, 1 Nov. (CDF).

MOTHS: SPHINGIDAE: *Ceratomia sonorensis*, Cave Creek ranch, Cochise Co., 8-9 July (RHL). *Sphinx dolli*, Cave Creek Cyn., early July (CDF). *Eumorphia typhon*, Madera Cyn., S. Cruz Co., larvae common on Virginia creeper, 15 Sept. (JPB, JM, MS & RW). SATURNIIDAE: *Eupackardia calleta*, mouth of Madera Cyn., Pima Co., larva on Ocotillo, 15 Sept. (MS). *Automeris pamina*, Cave Creek Cyn., early July (CDF). ARCTIIDAE: *Pagara fuscipes*, Pinery Cyn., Chiri. Mts., Cochise Co., 7 July, Ptych. phrada & Haem. mexicana, Cave Creek ranch, 8-9 July (all RHL). NOCTUIDAE: *Abagrotis gleini*, *turbulenta* & *Scriptania optimana* (COUNTY, STATE & new U.S. RECORD), Pinery Cyn., 7 July (RHL). *Cucullia lilacina*, Madera Cyn., 6 July & *Fotella notalis*, Cave Creek ranch, 8-9 July (RHL). *Eutelia furcata*, Pena Blanca L., S. Cruz Co., 11 July (RHL). *Euparthenos nubilis* was abundant & *Catocala delilah desdemona* taken in early July, plus *C. violenta*, 1 Nov., LATE, Cave Creek Cyn. (CDF) & *violenta*, Pinery Cyn., 7 July (RHL). *Isogona punctipennis*, Stanfield, Pinal Co., 11 July (RHL). NOTODONTIDAE: *Datana integ. cochise* & *D. chiriquensis*, Madera Cyn., 6 July (RHL). LASIOCAMPIDAE: *Tolyte glenwoodi*, Cave Creek Cyn., 1 Nov., LATE (CDF). GEOMETRIDAE: *Nemoria strigataria*, Pinery Cyn., 7 July & "*Semiothisa*" *kuschea* in grass at Rustler Park, 8500', Cochise Co., 10 July (RHL).

BUTTERFLIES: *Agathymus aryxna*, Box Cyn., S. Rita Mts., Pima Co., 13 Sept. & Sycamore Cyn., S. Cruz Co., 16 Sept. (JPB, JM, MS & RW). *Lerodea eufala*, nr. Portal, Cochise Co., 1 Nov., LATE (CDF). *L. arabus*, Nogales, May-June, EARLY (RAB) & Sonoita Cr. 3 mi. SW Patagonia, S. Cruz Co., 16 Sept. (JPB, JM, MS, RW). *Amblyscirtes simius*, 4 mi. S. Springerville, Apache COUNTY, 4 Aug. (JPB). *A. nereus*, Hwy. 666, 4 mi. S. Rose Peak, Greenlee COUNTY & NORTH, 24 July (JPB). *A. cassus*, fimbriata & *Poanes taxiles*, Rustler Park, 8500', 10 July (RHL). *Hesperia woodgatei* common, Oak Creek Cyn. below Slide Rock, Coconino Co., 1 Oct. (KD). *Stinga morrisoni*, Coronado Peak, Huachuca Mts., Cochise COUNTY & SOUTH, 30 Apr. (JPB). Relative explosion of *Lerema accius* in S. Cruz Co. with adults early May to late Oct. in a number of localities (RAB). *Piruna polingii*, Rustler Park, 8500', 10 July (RHL). *Heliopterus domicella*, nr. Cleator, Bradshaw Mts., Yavapai COUNTY & NORTH, 29 Aug. (CS) & Sonoita Cr., S. Cruz Co., its known haunt, 16 Sept. (JPB, JM, MS, RW). *Pyrgus philetas*, S. Cruz Co., Jan. (EARLY) thru winter & spring (RAB). *Chiomara asychis georgina*, Sonoita Cr., 22 Jan. EARLY (RAB). *Systasea zampa* adults thru 77-78 winter in S. Cruz Co. (RAB) & still flying at Sonoita Cr. on 16 Sept. (JPB, JM, MS, RW). *Urbanus proteus*, Baboquivari Mts., Pima Co., Apr., EARLY (RAB). First good year in a while for *Chiodes catillus albobasiliatus*, flying late March to mid-Nov. from Sycamore Cyn., S. Cruz Co. to the Chiricahuas, Cochise Co. (RAB). *Neophasia terootii*, Miller Cyn., Huachuca Mts., Cochise Co., 30 Aug., EARLY for fall brood (CS) & ♂♂ flying in tree tops on Mt. Graham, Graham Co., 1 Nov., LATE (CDF). *Eurema boisduvaliana* & *E. nise* appeared in May-June in S. Cruz Co.--these usually limited to the Aug.-Oct. season (RAB). *Anteos clorinde nivifera* & *Apodemia mormo mejicanus*, mouth of Madera Cyn., Pima Co., 15 Sept. (JPB, JM, MS, RW). *Ministrymon ines*, Nogales, S. Cruz Co., Feb., very EARLY--usually Sept.-Oct. (RAB). *Strymon melinus franki*, nr. Portal, 1 Nov., LATE (CDF). A single *Erora quaderna sanfordi*, Rustler Park, 8500', 10 July (RHL). Its describer found *rita emmeli* on *Eriogonum leptocladon* var. *papiliunculum*, 15-26 mi. SE. of Page, Coconino Co., 20 Aug. (OS). *Anaea andria ops* flew in July & A. *aidea* May-July, Nogales (RAB). A single *Mestra amymone*, 3.5 mi. SW. Patagonia, Santa Cruz COUNTY, 4 Aug. (JPB). *Thessalia theona thekla* larvae on *Brachystigma wrighti* (Scroph.), Sycamore Cyn. nr. Ruby, S. Cruz Co., 26 Aug. (JPB). Only one *Euphydryas anicia hermosa*, East Turkey Cr., Chiri. Mts., Cochise Co., 22 Apr. (JPB). *Precis coenia* with *P. nigrosuffusa*, Box Cyn., Pima Co., & *P. n.* common, W. Gate, Fort Huachuca, Cochise Co., 9 Aug. (JWB, DKF). *P. n.*, *Anthanasia texana*, *Euptoieta claudia* & *Danaus gilippus strigosus* adults thru 77-78 winter in S. Cruz Co. (RAB) with *claudia* & *strigosus* nr. Portal, Cochise Co., 1 Nov., LATE (CDF). *Paramacera allyni* abundant above 7500', vic. Rustler Park, early July (CDF) & plenty at Rustler Park, 8500', 10 July (RHL).

NEVADA: Many of the winter-spring storms that broke the 2-year drought in Calif. spilled over into Nevada, with the wettest spring in several seasons (RLL). In Clark Co. spring collecting was good (GA). Summer rains were sparse, and the fall flights of potentially bivoltine species were generally poor (GA). George Austin took 8-10,000 specimens representing some 155 species and 190 taxa. This resulted in over 200 COUNTY records [only partially detailed below] and at least 9 STATE records.

MIGRATORY SPECIES: *C. cesonia* very common mid-Apr. - early Aug. in Clark Co., extending northerly much further than previously recorded--Esmeralda, Lincoln, Nye, White Pine (all new COUNTIES)--Kingston Cyn., Toiyabe Mts., Lander COUNTY & NORTH, 15 Aug. *P. sennae marcellina* noted often 10 Apr.-3 July in Clark Co.--more than ever recorded (only 3 prior Nevada records). *L. bachmanii larvata* scarce, Grapevine Cyn., Newberry Mts., Clark Co., 23 Mar. 78 (possibly left-over from fall 77 mass movement) and only one 29 Oct. 78, Grapevine. *C. cardui* had a small NW. flight 10-28 Apr. No mass movements of *D. plexippus* observed (all GA).

BUTTERFLIES: *P. graciellae*, 7.5 mi. N. Goodsprings, Clark Co., 30 Apr. on *Atriplex canescens* (RW). *P. indra* ssp., Wheeler Peak Scenic Area, Snake Range, White Pine Co., 22 July (SD). Some *rita pallescens* were taken in the vicinity of Hancock Summit & Panaca, Lincoln COUNTY & SOUTHEAST, 18 Aug. (OS). A single *speciosa*, Willow Spring, Spring Range, Clark Co., 17 June, LATE (D. Mullins). *A. celtis montis*, 0.3 mi. N. "Shade Rest Ranch," Virgin Mts., Clark COUNTY, STATE & NORTHWEST, 11 Sept. (K. Roeber), 11 Oct. (GA). *S. nokomis apacheana*, 15 mi. S. Secret Pass, Elko Co., 2 Aug. (OS). In dos Passos checklist sequence, all following Nevada records from G.T. Austin: *P. eunus*, 8 mi. E. Fallon, Churchill COUNTY, 14 Aug. *E. telemachus* (det. J. Burns), Cabin Cyn., Virgin Mts., Clark COUNTY & STATE, 10 May-8 June. *S. zampa*, several cons. in the Newberry Mts., Clark COUNTY & STATE, 15 Apr.-23 May, 21 July, 20, 26 Sept. *E. clarus huachuca*, Cabin Cyn., 29 May, 26 June. *P. leo arizonensis*, Grapevine Cyn., Newberry Mts., 13 Sept. [3rd state record, others also Clark Co.]. *B. philenor*, Paradise Vy., Las Vegas, 24 Apr. & Grapevine Cyn., 21 Aug.--rare strays. A well-established pop. of *P. multicaudatus*, Cabin Cyn., Clark COUNTY, 27 Apr.-26 June. Small colony of *C. alexandra edwardsii*, Cottonwood Pass area, Clark Co., late Apr.-mid-May. *E. mexicana*, 9 mi. W. Davis Dam, Newberry Mts., 23 Mar., 20 Apr.--only 3 prior records for Nevada. *H. titus immaculosus*, Wilson Peak rd., 8100', & Bowlings Wash., 7900', Lincoln COUNTY & SOUTH, 1 Aug. M. Ieda, Jett Cyn., Toiyabe Mts., Nye COUNTY & NORTH, 29 July. *C. affinis*, Wilson Peak rd., 8000-8100', Lincoln COUNTY & SOUTH, 20, 28 June. *C. comstocki* in good numbers, vic. Red Cloud Mine, Bird Spring Range, Clark Co., 2 Mar.-4 May, 2-11 Sept. (70 by 3 collrs. 5 Apr.). *S. melinus setonia*, Hinkey Summit, S. Rosa Range, Humboldt COUNTY & STATE, 9 Aug. Fall-flying *battoides* nr. *ellisi* on *Eriogonum heermanni*, vic. Red Cloud Mine, Clark COUNTY & STATE, 2-11 Sept.--EAST, same as from desert ranges in Calif. A number of sites for *battoides martini* near Elgin, Lincoln COUNTY & furthest NORTH anywhere, 31 May, all assoc/w *E. fasciculatum*; *mojave* was found in Cabin Cyn., Virgin Mts.,

Clark COUNTY, STATE & EAST, 10 May-7 June [previous references to *mojave* in Nevada were *battoides baueri*--see Shields, 1975]; *spaldingi*, Bowlings Wash., 7900', Wilson Creek Range, Lincoln COUNTY, STATE & WEST, 1 Aug. *G. piasus sagittiger*, 3-4 mi. N. Lucky Boy Grade, Corey Peak rd., Mineral Co., 13 June. *G. piasus nevada* Brown, 1975, in good numbers, Angel Lake, Elko Co., 7 July [known from this loc., but cited as *daunia* in 1972 Summary before Nevada described]. *L. archippus lahontoni* from known locs. in Churchill & Lyon Cos., 10-14 Aug., plus Hwy. 21, 5 mi. S. of I-80, Eureka COUNTY, 8 Aug. *L. weid.* nr. *angustifascia*, Cabin Cyn., Clark COUNTY & STATE, 29 May-26 June. *P. coenia*, Virginia Range, Storey COUNTY, 16 June & Sheldon Antelope Range, Humboldt COUNTY & NORTH, 9 Aug. *A. texana*, Grapevine Cyn., Clark COUNTY & STATE, 12, 15, 20 Apr. *E. colon nevadensis* Topotypes & *S. electa* nr. *dodgei*, Wildhorse Cr. Cpgd., Elko Co., 8 July. *E. claudia*, Bowlings Wash., 7550', Wilson Creek Range, Lincoln COUNTY & NORTH, 28 June--4th Nevada record, others Clark Co. *Coe. californica*, Cold Cr., Spring Range, Clark COUNTY, 22 June--prior specimens in NSM from northern Nevada. *C. ampelos* & *C. ochracea brenda* sympatric, Ruby Mts., Elko Co., 6 July. *C. oetus pallescens*, Reese R. at Hwy. 2, Lander Co., 5-11 July common, 14 Aug. few worn (all GA).

CALIFORNIA: Enormous rains mid-Dec. 77 thru end of Apr. 78 (SD, RLL, AS) with 120 to 200% of normal in N. Calif. (AS). Open periods in Feb.-Mar. in Bay area, but species reduced or late (RLL), and spring late in foothills (AS). By late Feb. perennials leafing out, but few annuals on Mojave Desert (OS). Heavy rains on into spring delayed collecting in San Diego Co. which was only average (FT). Snowpacks in Sierra immense--Donner Pass with 103" on ground 7 Apr. and still 31" by 15 May (AS). Little moisture late spring thru summer in the lowlands and less fog than usual along the coast (RLL). Sporadic snow at high elevs. 27 June & 30 Aug., plus 3" rain on W. slope 5 Sept. with Hurricane Norman, and more snow 7 Sept. (AS). Autumn normal to a shade dry (AS), and staying generally dry in the Bay area until years end (RLL). In S. Calif., good winter rains in Nov. followed by cold in early Dec. (FT).

MIGRATORY SPECIES: Fresh *C. cesonia*, Koehn Dry Lake nr. Saltdale, Kern COUNTY & town of Red Mountain, S. Bdn. Co., both 18 Apr. (KD); nr. Virgin Spring Cyn., Black Mts., Inyo Co., 16 Apr. (JE); very common in Julian Wash. nr. Black Mtn., Imperial Co., 22 Apr.-6 May (JWB, DKF); common in parts of S. D. Co., 24 Apr.-29 May nr. Lake Henshaw, S. of Chula Vista & 1 mi. E. Imperial Beach, COASTAL (JWB, DKF, FT); sighted at Tioga Pass, 9941', Mono COUNTY, NORTH & HIGH elev., 6 Aug. (JM). *P. sennae marcellina* appeared in May, El Cajon, S. D. Co. with larvae on Cassia, but not observed after Aug. (FT). *C. cardui* lightly migrating W, WNW, NW & NNW on the Mojave Desert, 17, 27 Apr. (OS); small N-ward movement nr. Glamis, Imp. Co., 6 May (JWB); no well-defined N-ward migration [in N. Calif.] but a very clear-cut S-ward one in autumn (AS); abundant on rabbitbrush at Donner Pass, 30 Sept., passing thru Davis 16-25 Oct., and stragglers, all pointed S until 3 Dec. (AS); a worn ♀ in San Joaquin Co., 13 July, and singletons at 3 locs. in C. Costa Co., 4 Oct.-2 Dec. (RLL). A well-defined front of *P. coenia* passed thru Davis from SW to NE the afternoon of 28 Apr. & common thereafter (AS); numerous at Lang Crossing, 5000', Nevada Co., 3 May and already plentiful at Donner, 7000', with snow on ground, 14 June (AS); *P. coenia* abundant in Riverside & Newport Beach, 15 July (MG) Castle Peak, 9000', Nevada Co., 5 Nov., HIGH & LATE (AS); no migrations noted in Bay area, but resident adults at Pt. Richmond, C. Costa Co., from 23 Feb. to at least 9 Nov. (RLL). *N. californica* virtually absent from Kern Co. the past 2 years--most recent record 17 June 76 (KD); only 5 overwintered adults noted in Tuolumne Co. 24 Mar. & none seen in Coast Ranges (RLL); no big outbreaks, but individual records increasing with 2 on valley floor, Rancho Cordova, Sacto. Co., 25 Oct. (AS). *D. plexippus normal* (AS); several flying toward coast in Sta. Barb. Co., 6 Mar. in brief sunshine after week of floods, mudslides (RLL); worn adults Tuolumne Co., 24 Mar. & adults, early stages common San Joaquin Co., 5-14 July (RLL); Migrating SW in Amador Co., late Sept., greatest numbers in Bay area in Oct., and latest date 24 Nov., Napa Co. (RLL).

MOTHS: SPHINGIDAE: *Paonias myops* at blacklight, Greely Hill, 3600', Mariposa COUNTY, STATE & very far WEST!, 29 May (JM). *Celerio lineata* in high numbers in N. Calif., & "swarming" in the White Mts., Inyo-Mono Counties, July (AS). SATURNIIDAE: *Hemileuca nevadensis* extremely abundant, Washington Rd. at San Joaquin R., ENE of Los Banos, Merced Co., 22 Oct. (SM, JM, MS & RW). ARCTIIDAE: *Halisidota maculata*, Salinas, Monterey Co., 13 June (RLL). *Hyphantria cunea*, Atherton, San Mateo Co., many larvae in webbing on black walnut, 11 Sept. (RLL). NOCTUIDAE: *Copocucullia eulepis*, incresa & macdunnoughi, *Oncocnemis fasciata* & wilsonensis, Kernville, Kern Co., 13 May *C. eulepis*, Chalc. *koebelii* & *Melipotis acontoides*, Pinyon Crest, 4400', Riverside Co., 28 May. *Ozarka nebula* & *Ponom. macdunnoughi*, Pinyon Crest, 18 Mar. (all RHL). Many *Trichoplusia ni* nectaring in daytime, Buellton, 2 mi. S., S. Barb. Co., 28 Aug. (RLL). *Autographa californica* in large numbers Daly City, S. Mateo Co., feeding by day on Escallonia, Catoneaster, etc., 30 May (RLL); Kensington, C. Costa Co., nectaring at dusk & night on Lantana, Marguerites, 30 May (RLL); & by the thousands, flying by day seemingly moving N., visiting Pentstemon, Lang Crossing, 5000', Nevada Co., 2 June (AS) [expected economic larval outbreaks from these massive adult flights did not occur, possibly due to its extremely wide host range--T.D. Eichlin, (RLL)]. *Synedroida howlandi*, Pt. Richmond, C. Costa Co., 23 Feb., EARLY & 24 June (RLL). DIPTERIDAE: *Phryganidia californica* adults, ova on *Lithocarpus densiflora* (no other "oaks" in area), Humboldt Redwoods Park at 2400', 3 July (HK, RLL). GEOMETRIDAE: *Cheteoscelis bistriaria* & *Eup. rindgei*, Kernville, 13 May. *Semio. parcata*, 18 Mar. & *Hesperumia fumosaria*, 17 June, Pinyon Crest. *Stenop. vernata variana*, Pterot. *cavea* & *campestraria*, Big Bear L., S. Bdn. Co., 6 Aug. (all RHL). ZYGAEIDAE: *Harrisina brillians*, Pine Grove-Pine Acres-Volcano areas, 2000-2600', Amador Co., I to IV inst. larvae on Thompson, Tokay & wild grapes, 18-22 Sept. (RLL). SEIIDAE: *Ramosia polygona*, Marina Beach, Mont. Co., 15 June, assoc/w *Eriogonum latifolium* (RLL). ADELIDAE: *Adela thorpella* common & 3 *A. eldorado*, Kern River Cyn., Kern Co., 22 Apr. (RHL). BUTTERFLIES: *L. eufala*, 1 mi. S. Ione, Amador COUNTY, 9 Oct. (RW). *E. vestris* common nr. McCloud River mds. off Grizzly Peak Lookout Rd., Siskiyou Co., & off Hwy. 89 nr. Sisk.-Shasta Co. line, 2 July (CS). *P. melane* common, Little Falls Trail, Lopez Cyn., S.L.O. Co., 13 May (KD), & 1 nr. Julian, S.D. Co., 2 Oct. (FT) [both records showing a spread from urban areas]. Both sexes *O. sylvanoides*, EARLY with *O. agricola*, Shelter Cove, Humboldt Co., 1 July (HK, RLL). *O. agricola* versus at 2 locs. in Kelso Valley, Kern Co.--Rocky Point, 26 May, 14 June & nr. Sageland, 14, 29 June, plus rd. to Piute Peak above Bald Eagle Peak, 6200', 21 July (KD) [previously known only from Type loc.--Havilah]. *O. yuma*, Rancho Cordova, Sacto. Co., NORTH, 14 Oct., LATE (AS). *P. sabuleti tecumseh*, Big Meadow, 8000', Tulare Co., 12 July--SOUTH for this altitudinal form (KD) & rare 2nd brood, Lang Crossing, 5000', LOW, Nevada Co., 22 Sept., LATE (AS). *P. sonora*, Lang, 6 Oct., LATE (AS). *C. aurantiaca*, Sageland, Kelso Vy., Kern Co., 15 Aug. (KD). *C. palaemon mandan*, Elliot Creek Rd., Siskiyou Co., 28 May (SM, MS), common at Scott Camp Creek, 29 June & off Hwy. 89 nr. Sisk.-Shasta Co. line, 2 July (CS). *P. catullus*, Jackson, 1200', Amador Co., 20 Sept., 1 ♂ at light (RLL), & Davis, Yolo Co., 24 Oct., LATE (AS). *P. alpheus oricus*, Titanothera Cyn., 5000', Grapevine Mts., Inyo Co., 24 Apr. (JE); common around Atriplex bushes nr. summit Jawbone Cyn. Rd., 6000', Kern Co., 21 May (CS), 26 May (KD), whereas *P. libya* scarce at this elev. (CS). *H. ericetorum*, 1 mi. S. Ione, Amador COUNTY, 9 Oct. (RW). *P. scriptura*, Fremont, Warm Springs dist., Alameda COUNTY, 25 July (RLL). *T. diversus*, Scott Camp Creek, 29 June (CS) [not *drusus*, error in 1977 Summary]. *U. proteus* sighted in Tecate, Baja Cfa., 27 Sept. (PS); two in Sorrento Valley, S.D. Co., 1 Oct. (CS); and Torrey Pines Rd. N. of La Jolla, S.D. Co., 22 Oct., taken on Lantana (K. Hughes). *P. leo arizonensis*, nr. Julian, S.D. Co., 28 Sept. (FT). *E. clarus*, Gates Syn., Vaca Hills, Solano Co., 29 Apr. (AS) & Elliot Creek Rd., Sisk. Co., 28 May (SM, MS). *B. philenor hirsuta*, Gates Cyn., 29 Oct., LATE (AS). *P. polyxenes rudkini*, Cargo Muchado Mts. & Buzzards Peak, Chocolate Mts., Imp. Co., 23 Mar., adults form "clarki" (JE); ova on *Tauschia parishii*, Kern, S. Bdn. Cos., & larva on *T. arguta*, Riv. Co., all May (details, JE); and 2 larvae ex *Ruta* sp. (a Mediterranean medicinal plant), Tecate, Baja Cfa., May--NEW HOST & WEST (PS). *P. indra*, Hwy. 168 at 5500' SW. of Westgard Pass, Inyo Co. & trail to bristlecone pines, 10,000', 18 June (SD). *P. beckerii*, 8 mi. SW. Gazelle, Sisk. Co., 27 May (SM, MS) & 1 ♀ Donner Pass, Nevada/Placer Cos., 12 Sept. (AS). *P. napi venosa*, Little Falls Trail & Lopez Cyn., S.L.O. Co., 24 Feb. & 2nd brood larger, lighter, 13 May--but all *venosa* phenotypes (KD). *P. napi microstriata*, 3 mi. NE. Tuolumne City, 24 Mar. (RLL) & "castoria" phenotypes for the first time, Gates Cyn., Solano Co., 20, 28 May (AS). *P. napi marginalis*, 8 mi. SW. Gazelle, 27 May & Elliot Creek Rd., 28 May, both Sisk. Co. (SM, MS). *P. napi* ssp., South Warner Wilderness area, summit trail at 8700', HIGH ELEV., Modoc Co., 11-12 July assoc/w Cardamine (JM). *C. philodice* very common in fields, I-8 nr. El Centro, Imp. Co., 7 Oct. (KD). *C. harfordii*, nr. Liebel Peak, Kern Co., 21 July (KD) & Saddle Jct., 8080', HIGH, San Jac. Mts., Riv. Co., 26 June (JE). *E. nicippe*, Bodfish, Kern Co., 6 Mar. & N. of Kernville just S. of Tulare Co. line, NORTH, 15 Mar. (KD); scarce Newport Beach, Orange Co., 16 July (MG); and summit Santa Rosa Mtn., 8000', HIGH, Riv. Co., 17 July (JE). *N. iole*, McCoy Mts., Riv. Co., 26 Feb., EARLY (JE). *A. cethura* nr. *pima*, Buzzards Peak, Imp. Co., 23 Mar. (JE). *A. lanceolata*, summit trail at 8700', HIGH, Modoc Co., 11-12 July (JM). *E. hyantis andrewsi*, Whiskey Spgs., N. slope S. Bdn. Mts., 20 June, larvae on

Caulanthus major, NEW HOST (JE). *E. ausonides*, 3 mi. N. Nig Sur, Mont. Co., DOUTH for coast, 22 Apr. (RLL) & 8 mi. SW. Gazelle, Sisk. Co., 27 May (SM, MS). *A. mormo*, Balls Cyn., 4500', Lassen COUNTY, 1 Sept. on *Erio. umbellatum* sens lat & Plaskett Mdw., Glenn COUNTY, 1 Sept. (RW); and in 2nd. emergence due to bad weather, Lang Crossing, Nevada Co., 22 Sept.-8 Oct., LATE (AS). *A. mormo* blends to *langei*, 2-3 mi. NE. San Miguel, S.L.O. Co., 28 Aug. (RLL). *A. mormo* nr. *deserti*, Hwy. 395 nr. Homestead, Kern Co., 29 Aug., 18 Sept. (KD). *A. palmerii marginalis*, Shoshone, Inyo Co., 21 May (JE). *Calephelis wrighti*, American Girl Wash., Cargo Muchachos Mts., Imp. Co., 11 Mar. (JPB) & S. end Old Woman Mts., S. Bdn. Co., NORTH, fresh pair on *Bebbia juncea*, 2 Apr. (JE). *S. behrii*, nr. Sageland, Kelso Vy., Kern Co., 14 June (KD). *S. tetra*, summit Santa Rosa Mtn., 8000', HIGH, 17 July (JE). *M. ines* in spring flight!! with *M. leda* at Round Mtn., nr. Jacumba, 14 May & a single *leda*, Little Cedar Cyn. E. of Otay Lakes, S.D. Co., 10 June--WEST & COASTAL (JWB, DKF). *I. eryphon*, Castle Peak, 9000', HIGH, Nevada Co., 9 Aug. (AS). *M. loki*, Jacumba, 2 mi. W. 14 May, 2 mi. E. 14 July, S.D. Co. (JWB) & Little Cedar Cyn., E. of Otay Lakes, S.D. Co., 10 June--WEST & COASTAL side of Mts. (JWB, FT). *M. siva mansfieldi*, Quatal Cyn. 1 km. E. of Hwy. 33, Santa Barbara COUNTY & WEST, 20 Apr. (JM). *C. comstocki*, Titanothera Cyn., 5000', Grapevine Mts., Inyo Co., 24 Apr. & fall brood in Macedonia Cyn., 4800', Mid Hills, S. Bdn. Co., 10 Sept., LATE (JE). *C. lemberti*, South Warner Wilderness area, 8700', Modoc COUNTY, 11-12 July (JM). *C. viridis*, Marina Beach, Monterey Co., 22 Apr. (HK, RLL), 15, 22 June, worn LATE (RLL). *S. columella istapa*, one from residential area 1 mi. E. Imperial Beach, 14 May (JWB) plus Sorrento Valley, 1 Oct. & common nr. Torrey Pines, 15, 22 Oct. assoc/w *Sida hederacea* (CS)--all COASTAL San Diego Co. *L. gorgon*, Morettis Jct. nr. Lake Henshaw, only 2 ♂♂, 3 July--now scarce in S.D. Co. (JWB); n. slope Horse Mtn. at 3200', plus Hoopa, 1-4 mi. SW., 2 July & common Panther Gap Rd., 2600', SW. of Humboldt Redwoods Park, WEST & COASTAL--all Humboldt Co. & all assoc/w *E. nudum*--♂♂ darker than Bay area or S. Calif. pops. The best year in many for *L. hermes* in San Diego Co.: Common at Mission Gorge, 5-6 June (SD); abundant, Padre Dam, 9 June (FT); and Little Cedar Cyn., 10, 16 June among very healthy stands of *Rhamnus crocea* (RWB, FT). *L. mariposa* fresh, Donner Pass, 12-23 Sept., LATE (AS). *B. exilis*, Hemet, 1 Jan., EARLY (JE) & 1 mi. E. Sutter Creek, Amador COUNTY, 14 Oct. (RW). *L. marina*, summit S. Rosa Mtn., 8000', HIGH, Riv. Co., 17 July (JE). *P. neurona*, nr. Sageland, Kelso Vy., Kern Co., 14 June (KD). A single ♂ *battoides intermedia*, Lang Crossing, Nevada Co., 22 Sept., LATE (AS). Blends of *enoptes-bayensis*, n. slope Horse Mtn., 3200' & 4 mi. SW. Hoopa, NORTH, 2 July, roosting in heads of *E. nudum* (HK, RLL)--confirms 1907 J. Strohbeen records for *bayensis* in Humboldt Co.; *enoptes tildenii* common, 2-3 mi. NE. San Miguel, S.L.O. Co., 28 Aug. (RLL); *enoptes dammersi*, nr. Soboba Hot Spgs., 1500', Riv. Co., 25 Sept.--COASTAL side of mts. (JE). Larger sized & higher elev. pop. than typical *mojave* summit Jawbone Cyn. Rd., 6000+', Kern Co., 21 May, assoc/w *E. nudum* var. with yellow flowers (CS). Adults of *sonorensis*, 3 mi. NE. Tuolumne City, 2400', 24 Mar. (HK, RLL) & larvae common on *Dudleya cymosa*, Briceburg, Mariposa Co., 6 May (MS). *G. lygdamus palosverdensis*, Palos Verdes Peninsula, L.A. Co., 25 Mar. (OS). *N. milberti furcillata*, Rancho Cordova Sacto. Co., 2 Apr. (N. LaDue-1), 26 May, 2 fresh & 3 June (AS-1)--evidence of breeding in Central Valley and altitudinal dispersal. *P. faunus rusticus*, Jerseydale, 3500', Mariposa COUNTY & SOUTH, 12 Apr. (OS) & new to Donner Pass area, 7000', HIGH, 23 Sept. (AS). *P. zephyrus*, nr. Powderbox Spg., 7300', San Jacinto Mts., Riv. Co., 26 June, larvae on *Rhododendron occidentale* (JE). *C. hoffmanni*, Niagara Cr. Cpgd., Tuol. Co., 15 July (MS). *C. californica*, Buzzards Peak, Imp. Co., 23 Mar. (JE) & in outbreak numbers, Providence Mts., 17, 28 Apr. (OS). *P. mylitta*, Wildrose Cyn. at Thorndike Cpgd., Inyo Co., 10 July--range extension to the Panamints (RW). *P. orseis*, Elliot Creek Rd., 28 May (SM, MS) & Scott Camp Creek, Sisk. Co., 29 June (CS). *S. mormonia* ssp. (not arge), Mt. Eddy, Shasta/Trinity COUNTIES, 16 Sept.--new outside Sierra & in N. Calif. (AS). *A. vanillae incarnata*, Hemet, 1 Jan., EARLY & to end of Dec. 78, LATE, adults, larvae survived freeze of 18° F (JE) & one nr. Vallecitos, S.D. Co., 8 Apr.--1st record on Anza-Borrego Desert (JWB). *O. nevadensis* (even year!), 8 mi. SW. Gazelle, 27 May & Elliot Creed Rd., Sisk. Co., 28 May (SM, MS) plus summit trail, 8700', South Warner Wilderness, Modoc Co., 11-12 July, HIGHEST elev. known! (JM). *O. chryxus stanislaus* (even year!) common above Sonora Pass area, Mono-Tuol. Cos., 22 July (MS) & 29 July sympatric with *N. ridingsii* (JM).

HAWAII: Contributors: R.L. Langston, E.A. Rice (ER) & J.C.E. Riotte (JR). During an eight-day visit (17-24 Jan. 78) by RL to the island of Oahu, the leeward side (Honolulu, Mt. Tantalus, Koko Head) was mostly warm and sunny--a few clouds & sprinkles, plus the usual trade winds. The North Shore (Waialua, Haleiwa, Waimea Beach) and the windward side was generally cloudy with heavy rains most of these days in Jan.

BUTTERFLIES: Fourteen species are presently known for the entire Hawaiian chain--8 were in evidence on Oahu in Jan. *Hyalephila phyleus* was scarce, but found at 3 leeward spots (RL, ER). *Papilio xuthus*, a recent import from the SW. Pacific Islands or Micronesia was rather scarce, but noted in 6 separate locales on the leeward side. *Pieris rapae* seemed most abundant in Jan. along the North Shore-windward areas, a few to leeward. *Strymon bazochii* was in fair numbers at 5 leeward locales. Adults were not necessarily closely associated with *Lantana*. *Lampides boeticus* was common at several leeward spots, only a few North Shore & windward. *Vaga blackburni* (1 of the 2 endemic Rhops. in Hawaii), W. slope Mt. Tantalus, 20 Jan. (RL) & Round Top (Puu Ualakaa Park), 23 Jan., assoc/w *Acacia koa* (RL, ER, JR). *Agraulis vanillae* (a very recent import) was the most abundant Rhop. in Jan.--"swarming" at various spots both on the leeward & windward parts of Oahu. [These Jan. specimens averaged slightly smaller than *incarnata*, otherwise identical to examples from Calif. & the greater Southwest. A stable phenotype with very few minor abs. noted.] *Danaus plexippus* adults, early stages were common both leeward and windward. Many adults at Waialua, Haleiwa & the Waimea Botany Gdns. A very small % of the monarchs on Oahu are albinos--their occurrence more prevalent in the "winter" months. Three albinic adults were observed/taken on 23 Jan.--Aina Haina, Foster Gdn. & nr. the Bishop Museum--all in the greater Honolulu area on the leeward side (RL, ER, JR). Numerous larvae & pupae were collected (ER, JR) ex Crown Flower (*Asclepiadaceae*) where one albino adult was taken, but all emerged disgustingly orange!

MOTHS: Many of the Heterocera on the Hawaiian Islands are imports from elsewhere in the world. SPHINGIDAE: *Macroglossum pyrrhostictum*, Mt. Tantalus, trail to summit, 20 Jan. NOCTUIDAE: *Plusia chalcites*, Mt. Tantalus, W. slope, 21 Jan. *Melipotis indomita*, Diamond Head, SW. slope, 22 Jan. *Hypena obsoleta*, Honolulu, Kalihi Dist., 23 Jan. GEOMETRIDAE: *Semiothisa santaremaria* (the Koa haole moth--an endemic), Mt. Tantalus, nr. summit & lower W. slope, 20, 21 Jan., & Round Top, 23 Jan. PYRALIDAE: *Hymenia fascialis* abundant, Bishop Mus. grounds, W. slope of Mt. Tantalus, & along the Ala Wai Canal, Waikiki, 19-22 Jan. *Hedylectra localis* (a native to Hawaii), W. slope of Mt. Tantalus, 21 Jan. (all RL).

ZONE 2: No report.

ZONE 3: ALBERTA, MONTANA, WYOMING, UTAH, COLORADO & NEW MEXICO. Coordinator: Donald Eff (DE). Contributors: Bagdonas' Flying Circus* (see BFC note below), Jim Brock (JB), George W. Busby III (GB), Peter Eades (PE), Clifford D. Ferris (CDF), Clyde F. Gillette (CFG), Paul Grey (LPG), Steve Kohler (SK), Steven Mueller (SM), and Ray Stanford (RES). [** (BFC). Once again Karolis Bagdonas had his "Flying Circus." Last year it was a group of seven students, this year it numbered 18! A group this large, working virtually around the clock can amass an amazing amount of data, and cover a lot of territory. As an example, an excerpt from their condensed report reads--"Echinargus isola--COUNTY RECORD, Kiowa Co., 2 mi. N. Sheridan Lake, 16 VIII 78 (2). A very good year. Also recorded for Boulder, Larimer, El Paso, Weld, Gunnison, Lincoln, Crowley, Otero, Bent, Prowers, Kit Carson and Yuma Counties." This year the BFC was composed of Lynell Marie Bagdonas, William Bagdonas, Terry Clifford, Mark Harrington, Sharon Hill, Jim Hogue, John Hranac, Chuck Lanham, Marilyn Lanham, Tom McGann, Terry Meeks, Kathy Ramsey, Mike Regh, Mary Schwind, Valerie Seid, Lisa Snyder, Cindy Sorg, Samantha Thompson, Marion Trieste, Catherine Wilkinson & Elizabeth Williams.] The summer collecting in 1978 was about as expected. The winter of 1976-77 was one of the driest in history and total moisture for 1977 was well below average. So was the collecting. The winter of 1977-78 was also dry and mild until late spring. Heavy snows in May created not only problems for the populace, but also for many of the Lepys. The late snow pack in the high mountains created a heavy run-off and flood conditions in some areas. Colder than normal weather eased that problem somewhat. Combined with a dry and cool fall this resulted in a shorter than normal season. Overall result was below normal collecting.

ALBERTA: For the first time in several years, no information was received on conditions or collecting in Alberta.

MONTANA: The only report from this state was by Steve Kohler who reported a goodly number of scarce species, new COUNTY RECORDS and Range Extensions. These were; *Polites draco*, Broadwater Co., Duck Cr., 20 mi. NE. Townsend, 22 June; *Erynnis icelus*, Madison Co., Mill Cr., Tobacco Root Mts., 23 June; *Erynnis afraenus*, Meagher, Judith Basin, Flathead & Glacier COUNTIES, various localities, 20-26 June; *Papilio i. indra*, Carbon Co., Rock Cr., nr. Red Lodge, 13 July; *Colias meadi elis* & *C. nastes streckeri*, Glacier Co., Spot Mtn., nr. Two Medicine, 3 Aug.; *Euchloe olympia rosa*, Musselshell Co., Bull Mts., & Golden Valley Co., Little Snowy Mts., 23 & 24 May; *E. h. hyantis*, Broadwater Co., 7 mi. W. Three Forks, 22 May; *Callophrys nelsoni* complex, Sanders Co., nr. Noxon, 7 June; *C. a. affinis*, Sweetgrass Co., Swamp Cr., Crazy Mts., 12 July; *Plebejus shasta minnehaha*, Sweetgrass & Carbon COUNTIES, at Swamp Cr., Crazy Mts. & Rock Cr., nr. Red Lodge respectively, 12-13 July; *Everes amyntula albrighti*, Broadwater Co., 7 mi. W. Three Forks, 22 May & Pondera Co., Birch Cr. & Hwy. 89, 21 June; *Philotes battoides glaucon*, Missoula Co., Ninemile Prairie, 29 June; *Polygonia oreas silenus*, Missoula Co., So. Fk. Lolo Cr. & Miller Cr., from 25 Aug.-26 Sept.; *Euphydryas gillettii*, Missoula Co., Cottonwood Lakes, 10 mi. E. of Seeley Lake, 21 July; *Speyeria egleis albrighti*, same data as preceding plus Sweetgrass Co., Swamp Cr., Crazy Mts., 12 July & Glacier Co., Spot Mtn., nr. Two Medicine, 3 Aug.; *Coenonympha inornata benjamini*, Glacier Co., nr. Kiowa & Babb, 21 June; *C. haydeni*, Broadwater Co., Duck Cr., Big Belt Mts., 20 mi. NE. Townsend, 22 June & Powell Co., nr. MacDonald Pass, 23 June; *Oeneis uhleri varuna*, Broadwater, Yellowstone, Musselshell, Golden Valley & Fergus COUNTIES, all 22-25 May; *O. a. alberta*, Golden Valley, Little Snowy Mts., 24 May, Judith Basin Co., 6 mi. E. Geyser, 26 May & Glacier Co., 6 mi. NW. Babb, 1 June; and *Erebia magdalena*, Carbon Co., Beartooth Plateau, 13 July. All the foregoing are new COUNTY RECORDS. The most interesting of those listed would seem to be *P. i. indra*, *C. m. elis*, *n. streckeri*, *C. a. affinis*, *P. o. silenus*, *O. u. varuna* & *O. alberta*. Steve is to be commended for adding so much to the knowledge of Montana Leps.

WYOMING: Because of the weather in May, spring collecting was virtually impossible. About 10 June some species normally flying in June began to appear. Possibly freezing May temperatures may have wiped out most or at least many of larval overwintering species which would have broken diapause at that time. Unaffected, however, were *Euphydryas* spp. & *Mitoura spinetorum*, which were more abundant than normal at several locations. *Speyeria*, at least in eastern Wyoming were in greatly diminished numbers (CDF) and particularly in the Sierra Madre Mts. (CFD & DE). Jim Brock again visited the area west of Buffalo, Wyo., this time 3 weeks earlier (last of June) and found interesting collecting. He reports 25 species in about 3 hours collecting. Included were *Oeneis uhleri*, *Neominois ridingsii*, *Polydryas arachne* & *Hesperis pahaska*. Ray Stanford, accompanied by Jim Scott explored the two most southwesterly counties (Sweetwater & Uinta) and reported several records for this uncollected area. Mentioned were *Papilio zelicaon*, *Euchloe hyantis*, *Anthocharis sara*, *Vanessa virginiensis*, *Mitoura siva*, *Glaucopsyche lygdamus oro* & *Euphydryas editha*, this last found mostly in barren country containing very few butterflies. Paul Grey notes an interesting phenomenon in Western Wyoming where *Papilio indra* had a good year. This species apparently has distinct local micro species with their own biologies and ways of life. Swift Cr. specimens in Lincoln Co., the more northerly colony, is the first to appear on the wing and are worn and "going over" just as specimens in the Utah Green River Canyon which is not far distant or different in climatic factors are just beginning to emerge. He found collecting in the Granite Cr. area (Teton Co.) good and *Pyrgus ruralis* in more than its usual single numbers. Ferris took one new County record, that for Carbon Co., west slope of the Sierra Madre Mts., a *Piruna pirus* taken 24 July. The normal endemics were seen on the Snowy Range in August, but in reduced numbers. Most bog species were scarce. An unusual record was a single ♂ of *Hemiargus isola* (CDF) taken at 9000', 5 Aug. on Sand Lake Road, above Centennial in Albany Co.

MOTHS: Ferris reports collecting as being poor. This was probably due to the cold nights most of the summer, and the high winds. Only 2 *Hyalophora gloveri* were seen, only 1 *Sphinx vashti* taken at light, and sugar baiting was generally unproductive during late summer, with only one species of *Catocala* taken. *Sphinx cerisyi* were common on Pole Mtn. 18 June nr. Laramie.

UTAH: As with Montana and Wyoming, coverage not great, but some interesting notes. C.F. Gillette was the only resident collector submitting a report, and much of his concern was with old, unpublished records and proper credit due to the collector, a worthy idea but hard to adhere to in the past because Utah collectors were few, and information on Leps skimpy. Also this concern with STATE and COUNTY RECORDS was not the primary purpose of the SS, but rather something which has evolved in recent years. NEW STATE RECORDS: *Papilio nitra*, larvae collected (CFG) July, vic. Deseret Peak, Stansbury Mts., Tooele Co., feeding on *Lomatium nuttallii*. ♀ emerged 13 Aug. *Oeneis alberta* ssp. collected by John Masters (reported by CFG) April, Washington Co. COUNTY RECORDS indicated by capitalizing name of the County. *Vanessa virginiensis*, 9 July, ridge N. of Deseret Pk., Stansbury Mts. of TOOELE Co., *Precis coenia*, 17 Aug., Cougar Hollow, S. of Tropic Reservoir, KANE Co. (SJM). Four records of this for Utah, this the 1st for Kane Co. He recorded some 40 species (mostly from Garfield Co.) but nothing in numbers. Some of the more interesting...*Neophasia menapia*, *Satyrus behrii crossi*, *S. saepium*, *Polydryas arachne* & *Cercyonis meadi mexicana*, all taken nr. the entrance to Bryce Canyon & *Neominois ridingsii*, *Phyciodes pallida barnesi*, *Colias alexandra*, *Adelpha bredowii* & *Limenitis weidemeyerii* in Swamp Canyon, which is inside of Bryce Canyon Nat. Pk. Cougar Hollow, where *Precis coenia* was taken yielded a number of species including *Philotes spaldingi*, *Phyciodes campestris*, *Speyeria egleis chitone*, *Plebejus m. melissa*, which along with *Nathalis iole* appeared to be the two commonest species encountered. Other than the foregoing, two brief reports were received for Daggett Co. in the NE corner of the State, one from BFC and the other from RES. Since this area was collected last year for the first time, and then only for one day, virtually everything taken is a new record. This year BFC recorded *Hesperia comma* (common), *Anthocharis sara julia*, & *Chlosyne palla flavula*. RES reported *Erynnis afraenus*, *Pieris sisymbrii*, *Euchloe hyantis*, *P. mylitta*, *Chlosyne acastus*, *Euphydryas editha*, *Mitoura siva* & *Philotes eoptes ancilla*. Enroute back to Colo. from Montana I took time out to check on condition of the colonies of *Speyeria nokomis* found in Duschene Co. as I try to do every year. Numbers down a little as expected, due to drought of previous year, but one colony had suffered. This was a colony discovered only a year ago, located along a country road in the corner of a hay field. Roadside spraying for weeds had decimated this colony but a few males and females were seen. The big colony which is on Indian land, however, seemed to be in good condition, in spite of some changes.

MOTHS: Daggett Co., all probable new COUNTY RECORDS, collected by BFC. *Coloradia pandora*, 15 June; *Pachysphinx occidentalis*, *Sphinx chersis*, & *vashti*, all 15 June; *Manduca quinquemaculata* & *Diacrisia vagans*, both 16 June. Also *Apantesis parthenice* & *phyllira*, plus *Tolype distincta*, taken 8 & 9 Aug. *Arachnis picta*, taken in numbers, 8 July & 9 Aug. with note made of the fact that these beautiful moths have evolved a bright reddish coloration to match the color of the canyon walls. In Aug. specimens were taken of *Catocala semirelecta*, *briseis* & *stretchi*.

COLORADO: Reviewing reports for Colorado, a number of random thoughts came to mind. One was that Leps in Colo. apparently did not suffer so adversely from the effects of the weather, as they did in Wyoming. Also that in an area where the topography is so varied, how a little distance in some direction can change what can be collected. For example, *Nymphalis californica* has always been rare locally, yet found regularly a few miles south in Gilpin and Jefferson COUNTIES, as did PE this year (Golden Gate State Pk., 17-22 July, fairly common). This year recorded to the north of Boulder in Lefthand Canyon, Boulder Co. (BFC). I also wonder about the relative difference in numbers when two different reports may class a species as common, or uncommon. And finally, I can't help but wonder about the difference in collecting patterns as evidenced by what a collector reports. Certainly time, ability to travel, even physical ability creates differences. Peter Eades, a young, avid, energetic Boulder collector consistently takes *Asterocampa celtis* commonly in his yard and nearby area in western Boulder. I've never taken it but once, other than 2 or 3 strays in past 33 years, so I'm always envious, yet I have taken *Boloria b. toddi* commonly in western Colorado as I ranged further afield. This year PE was thrilled to take his first specimen, and this thrill of a "first" is one of the joys of the hobby. No new STATE RECORDS were reported this year, but as transient collectors continue to report their more interesting captures, and local collectors venture further afield into previously unknown or little collected areas, and coupled with recognition of the influx of more southerly species, a better overall picture and many County records are coming to light. Again, where such is the case the County name is capitalized. *Polites sabuleti*, Mesa Co., Highline Lake, 25 Aug. (PE); *Thorybes mexicana*, JACKSON Co., Sand Dunes, 18 June (BFC); *Amblyscirtes aenus*, GILPIN Co., 2 July (RES); *Polites sonora utahensis*, FREMONT Co., 21 July; *P. coras*, LAKE Co., west side Weston Pass at 12,000', 17 July; & *Atrytonopsis vierecki* or *hianna*, LARIMER Co., Spring Canyon Dam, 26 May...a northern range extension. *Parnassius ph. sayii*, reportedly very common (BFC), but

P. ph. pseudorotgeri uncommon on Apishapa Pass (CFF). In the Swallowtails *Papilio polyxenes asterias* continued to show signs of its notable increase of last year, with females busy depositing ova everywhere on dill, parsley and even parsnips (!) in Boulder Co. in particular (PE-DE-BFC), but also in Fremont and Custer Counties (BFC). Elsewhere in this group, a real rarity *Battus philenor* was recorded from Tolland, Gilpin Co., 2 July (BFC); *P. zelicaon*, OURAY Co., 2 mi. S. Ouray, 18 July (BFC); *multicaudatus* and *rutulus* had good years with an interesting note of a "good second brood" in August of the latter being unusual (BFC). *P. i. indra*, GILPIN Co. taken by Jim Scott, reported by RES, 2 July, and while *indra* remained scarce, the previous Moffat Co. record was confirmed this year (BFC). In the Pieridae the big news was *Zerene caesia*. BFC reported it from Browns Park, MOFFAT Co., 15 June plus 17 additional records for Larimer and Boulder counties. PE recorded it from Douglas Co., Park Co. and in numbers in Boulder Co., in 6-10 Sept. in Sunshine Canyon. He reasoned it a migration because most were badly worn but there were some fresh specimens. *Ascia monuste*, Boulder Co., 6 Aug. (PRE), the 12th record for the state. *Phoebis sennae*, GUNNISON Co., 7 mi. W. Monarch Pass, 17 July (BFC) who also recorded 8 more specimens for Larimer, Boulder & El Paso counties. *Nathalis iole* common and more wide-spread with RECORD for PITKIN Co. (RES). *Pieris beckeri*, ROUTT Co. (RES), and with additional RECORD from Larimer Co. has apparently become established there. *P. napi mcdunnoughi* & *sisymbrii elivata* more common than usual, *Colias scudderii* down in numbers, *Anthracis sara* on the upswing, *C. alexandra* about normal but with one report of an unusual male with orange colored forewing, Lake Co., Tennessee Pass, 7 July (GB). In the Lycaenidae, *Plebejus shasta pitkinensis*, OURAY Co., 2 mi. S. of Ouray, 18 July; *Echinargus isola* (see note by BFC at beginning), *Brephidium exilis*, MOFFAT Co., Green River at Browns Park, 16 June; *Leptotes marina*, OURAY Co., Ouray, 18 July and at Sand Dunes in JACKSON Co. (BFC). Taken also by PE at Golden State Park, GILPIN Co., 22 July and in MOFFAT Co., 5 mi. N. of Dinosaur, 24 Aug! *Mitoura siva*, JACKSON Co., Grizzly Cr., 18 June; *Callophrys apama*, JACKSON Co., Sand Dunes, 18 June and at Pawnee Buttes, Weld Co., 21 June. PE noted late flight, clear into July. *C. sheridani* apparently is coming back after a number of lean years with a late record (6 July) by GB for Rabbit Ears Pass, Routt Co. and a new MOFFAT Co. (late May) by RES the more intriguing. Everyone but the coordinator seems to have taken *M. spinetorum* which seems to have had a banner year. It was taken in Gilpin Co., Golden Gate State Park, 8 July; Grand Co., Winter Park, 15 July; Summit Co., W. approach to Loveland Pass, 1 July and common along Hwy. 6 (all PE). GB took it at 12,200' on Berthoud Pass, 4 July, an unusual high altitude capture, and abundant the next day nr. Fraser, in Grand Co. *Hypaurotis crysalus* was found commonly nr. Sedalia & Castle Rock, Douglas Co., July by PE, and by BFC in Gunnison Co. at Camp IDRAHAJE, 19 July. It has suffered in recent years disappearing completely from a number of localities. Reports on the remaining Theclinae do not indicate any unusually abundant or scarce species. There were a couple of good reports, one for *Satyrium sylvinus*, Gunnison Co., Erickson Spgs. CG, 19 July (BFC). Nearby Big Muddy Cr. has always been a stronghold for this. *S. c. godarti* was found in some numbers at the above locality, also by BFC. Blues were scarcer than usual, most notably *P. acmon*, *icarioides*, *Glaucopsyche piasus*, *Philotes enoptes* & *Lycaena heteronea*, with only *Agricides gl. rustica* & *Lycaides melissa* enjoying good seasons. In the Riodinidae, it was nice to see *Apodemia nais* around again. PE found it in Boulder, Gilpin and Jefferson COUNTIES and BFC took it N. of Boulder in Lefthand Canyon. The biggest surprise though was the report by PE of *A. mormo* as "fairly common" in the sagebrush, MOFFAT Co., 12 mi. N. of Dinosaur, at 8000', 24 Aug. Excellent new RECORD. In Libytheidae, some nice records. *Libythea bachmanni*, SAGUACHE Co., 11 mi. S. of Moffat, 8 Aug. (JB); Gilpin Co., Golden Gate State Park, 17 July, by (PE); and RES reports that Mike Young took it in Cheyenne Co., nr. Cheyenne Wells. In the Danaidae everyone noted the abundance of *D. plexippus*. PE in his report simply said it was "common in the fall, especially late Sept. & Oct.", but RES said that he should have noted also RIO BLANCA Co. 25 Aug. since it would be a new COUNTY RECORD, as was BFC's report for LINCOLN Co., Hwy. 71 from Limon to Punkin Ctr. (I still haven't found this metropolis!) where it was common along the road, 15 Aug. Also *D. g. strigosus*, BENT Co. at John Martin CG, 15 Aug. In the Nymphalidae, some interesting records. RES (accompanied by Jas. Scott) found *Vanessa virginiensis* & *annabella*, MOFFAT Co., 27-30 May; *Chlosyne acastus*, ROUTT Co., same time (RES). *C. palla flavula* was a record of note for RES nr. Aspen, Pitkin Co., 15-17 June. In fact this was a good year for *flavula*, as I found it common on Rabbit Ears Pass, Routt Co., 30 June (DE). The same was true for *C. palla calydon*, Grand Co., Beaver Cr., 29 June (DE). *V. cardui* had another of its populous years and BFC alone recorded it from 18 counties. *Aglais milberti*, a good year in the mountains; *Limenitis archippus* better than usual on the plains (PE & BFC), and all Phyciodes except perhaps *tharos*, about normal numbers with *nycteis drusius* common some places in July (PE) and down in others (BFC). *Euphydryas* were reported to be in about normal numbers with RES finding *editha gunnisonensis* common nr. Aspen, Pitkin Co., 15-17 June, & *e. nr. alebarki* in sufficient numbers in Grand Co., Beaver Cr. to permit Paul Ehrlich and me to collect sufficient numbers for him to continue his experiments. JB's report of 14 species taken on Red Mt. Pass, San Juan Co., 9 Aug. was the only report of *C. damoetas*. His date of capture made me realize that I had looked for it too early this year, and that I had failed to mention earlier in this report the fact that this was a good year for *Lyc. c. snowi*...although it was no easier to catch! *Polygonia interrogationis*, always rare in Colo. was fairly common in Lafayette in late Aug. to mid-Sept. (BFC) and taken as well by PE & DE (fresh specimen). One of the nicest captures was a fresh *Thessalia fulvia*, JEFFERSON Co., Lookout Mtn., 4 July (PE). Not uncommon in western and southern Colo. but this was a unique locality for it. The various *Boloria*, other perhaps than *eunomia caelestis* seemed to enjoy a good year, although GB did find it common at Quartz Cr. in Gunnison Co., 9 July. *B. t. helena* was especially common (BFC-PE-DE). RES found a new colony of *B. b. toddi* in the Aspen, Pitkin Co. area and I was introduced to a colony on Willow Cr. Pass, Grand Co. by T.H. Dickel. Unfortunately the *Speyeria* did not fare well except for *mormonia eurynome* of course. The only success of note was CDF's capture of a series of the endemic *atlantis* ssp. 17-19 July on Apishapa Pass, Spanish Peaks area of Huerfano Co. but even they were not common. RES took *Speyeria e. secreta* in Glenwood Canyon fresh, mid-June. In the Satyridae PE discovered a colony of *Euptychia dorothea* where it was common (which is very uncommon!), Jefferson Co., Coal Cr. Cyn., 22 July. In the remainder of this family, in the genus *Qeneis* only *chryxus* enjoyed a year of abundance in numbers. *O. uhleri* was about normal, ditto *m. lucilla*, *p. brucei* was very scarce (BFC, PE, JB, DE). One of the lesser known subspecies *O. u. reinthali* was much more common than usual this year, Grand Co., Beaver Cr., 22 June. In the *Erebia* apparently *callias* was in lesser numbers, while *epipsodea* had a very good year. *E. magdalena* was down in numbers from '77 and only two collectors (BFC & JB) mentioned *E. theano*, although this was the year it should have been fairly common. *Cercyonis* were poor, but BFC took *pegala*, CHEYENNE Co., 12 mi. S. of Cheyenne Wells, 16 Aug. and *meadi alamosae* was common in the vic. of San Luis Lake, Alamosa Co., 27 Aug. (PE).

MOTHS: The only in-depth report was by BFC. Karolis in his covering letter explained that many species were flying in reduced numbers this year, and that this perhaps was due to the heavy snows and delayed season. Still they collected 2 new STATE RECORDS and 59 new COUNTY RECORDS! STATE RECORDS: *Leparctia lena*, LARIMER Co., Stove Prairie, 16 May, one taken and one other seen. Captured by Terry Clifford. *Catocala dejecta*, ROWLEY Co., Lake Henry, 14 Aug. taken by Tom McGann & Lynell M. Bagdonas of BFC. This is the first confirmed black underwinged *Catocala* recorded from Colorado! In the Saturniidae reported were *Agapema homogena*, 4th Colo. specimen, Fremont Co., Bear Cr., 9 June; and *Antheraea polyphemus olivacea*, a capture which confirmed this recently rediscovered subspecies for this state. Taken Fremont Co., Bear Cr., 9 & 10 June. It was also interesting to note that *Hyalophora gloveri*, absent last year provided only 2 records this year, and that *H. cecropia* & *Automeris* io were virtually absent. *Antheraea polyphemus* was scarce but RES did take it at Aspen, Pitkin Co. **Sphingidae**...two rare Colo. species reported. *Sphinx drupiferarum*, Larimer Co., Lower Rist Cyn., 28 May & *Ceratomia amyntor*, Moffat Co., Green River at Browns Pk., 15 June. *Hyles lineata*, esp. abundant (CDF) and BFC recorded its explosion with records from 20 counties. In the Lasiocampidae, we find a county record for *Tolype distincta*, MESA Co., Island Acres CG, 24 mi. E. Grand Jct., 7 July. In Syntomidae, BFC listed *Lycomorpha groteti*, Moffat Co., Browns Park Swinging Bridge, 9 Aug. and a number of species were recorded from the Arctiidae, mainly from Larimer Co. These included *Ammilia roseata*, *Apantesis blakei*, *A. phyllira*, *A. patthenice*, *Phragmatobia fuliginosa*, *Nearctia brucei* & *Arctia caia*. This was the best year ever for this last named, rare and beautiful moth. It was taken in RMNP and the food plant was found to be Mountain Avens (*Dryas octopetala*). Also *Arachnis picta*, Moffat Co., Green R. at Browns Park, 10 Aug. (1 red ?) and MESA Co., Island Acres CG, 24 mi. E. of Grand Jct., 7 July (3 yellow ?s). Also *Apantesis cervinodes*, a very rare alpine moth in Colo., taken Lake Co., Weston Pass, 12,000', 17 July. *Copidryas gloveri*, BENT Co., John Martin Reservoir CG, 15 Aug., the second confirmed record of this Agariistidae from Colo. In the Noctuidae, everyone is aware of *Erebos odora* and BFC recorded this rare tropical migrator from Ft. Collins, Larimer Co., 12 July. In the Catocala, a number of interesting captures...*C. micronympha*, Larimer Co., Ft. Collins, 7 Aug. (2nd confirmed record for Colo.); *C. amestris*, ditto but taken at LaPorte, N. of Ft. Collins, 30 July; *C. faustina*, Mesa Co., Island Acres CG, 7 July; *C. unifuga*, Crowley Co., Lake Henry, 14 Aug. and finally *C. amatrix*, a rare eastern species to be found in Colo., taken at Lake Henry in Crowley Co., 14 Aug.

BFC reported *C. groteiana* as scarce but RES claims it was common at lights in Denver area in mid-Aug. This moth report will be concluded with a failure, namely another in my continuing attempts to locate and collect *Euproserpinus phaeon westi*. May have to hire BFC! In concluding this report on Colorado collecting, RES reports that a Xerces Butterfly count on 2 July with 12 participants in six parties recorded 100 butterfly species in the Jefferson/Gilpin Co. area for a new North American Record.

NEW MEXICO: Only one report, that from CDF who spent 24-27 June with Richard Holland from Albuquerque collecting in the Chuska Mts. Numerous endemic species were collected, but none in numbers. The local *Euphydryas anicia* (which they have under study) was quite common near Toadadena in San Juan Co. as was the very large *Phyciodes tharos* segregate also found there. The Silver City area in Grant Co., western Sierra Co., and southern Catron Co. was collected in early July. The number of specimens, and the species diversity was well above normal, although no new COUNTY RECORDS were taken. *Eroria quaderna sanfordi* was especially common on the east slope of the Black Range, Sierra Co., 3 July, as was *Apodemia nais*. All of the endemic skippers were collected, but emergence of some seemed delayed, *Amblyscirtes aenus*, for example. *A. cassus* was common in early July and *A. nereus*, usually quite scarce, flew strongly in mid-July. Intergrades between *Junonia coenia* & *nigrosuffusa* were taken 28 June, in a wash along the San Francisco River where it crosses US 180 in Catron Co. A late season trip was made to the area in October. Areas collected were the E. slope Black Range, Sierra Co.; Mimbres River Valley, Grant Co.; Grapevine CG along the Gila River, Grant Co.; and Whitewater Cr., N. of Glenwood, Catron Co. Captures reflected mostly those things considered common, such as *Pyrgus communis*, *C. eurythema*, *philodice*, *P. protodice*, *V. cardui*, & *annabella*, *H. isola*, *B. exilis*, *D. plexippus*, *g. strigosus*, etc. Here, at this time, all hibernating species were conspicuous by their absence. The weather was generally cool, but sunny and bright. MOTHS: Light-trapping and sugar-baiting were productive. *Agapema homogens* & *Coloradia luski* were taken in Cherry Cr. Cyn., n. of Silver City, 28 June along with numerous other species. *Gallinas* Cyn. in the Black Range was especially productive, 8 July. Trap had to be emptied every 15 min. to prevent damage to delicate species. Sugar baiting produced *Catocala verrilliana*, *C. violenta* & *C. delilah desdemona*. *C. chelidonia* (det. E. Quinter) was taken at light in Bayard, Grant Co., first week of July.

ZONE 4: MANITOBA, NORTH DAKOTA, SOUTH DAKOTA, NEBRASKA, OKLAHOMA, TEXAS. Coordinator: H.A. Freeman. Contributors: George Balogh, Jim Brock, George W. Busby, III, H.A. Freeman, Jeffrey B. Frey, Steven E. Peterson, Jr., Jack B. Prentiss, David Prochnow, C.S. Quelch. General Conditions: Locally very good, especially in Texas. Generally normal throughout the entire zone.

MANITOBA: C.S. Quelch reported that collecting was fair, indicating that some species usually common were almost absent, particularly the blues and Colias. This was most likely due to bad weather that happened during the normal emergence time of those two groups. *Colias christina alexandria* & *Papilio kahli* were present but in much less numbers than during the past year. *Thymelicus lineola* was swarming on alfalfa. *Polygonia interrogationis* was present (single specimen captured).

NORTH DAKOTA: George Balogh reported from Ransom Co., NW. of McLeod, 27 June, the following: *P. mystic dacotah*, *P. themistocles*, *L. melissa melissa*. No *H. dacotae* were collected. Slope Co., Columnar Junipers area N. of Amidon, 20 June. Good collecting. Apparently spring rains brought out many species of plants and butterflies in good numbers. The following were reported: *Amb. oslari*, *A. hianna*, *H. uncus*, *O. garita*, *T. pylades*, *P. communis*, *M. texanus leussleri*, *P. multicaudatus*, *P. occidentalis*, *P. protodice*, *C. alexandra*, *C. siva*, *P. acmon*, *P. shasta*, *C. tullia*.

SOUTH DAKOTA: George Balogh reported from Harding Co., north end, Slim Buttes, 21 June, that few species were common. The following were reported: *A. vialis*, *A. hianna*, *H. uncus*, *H. pahaska*, *P. origines*, *O. garita*, *P. communis*, *T. pylades*, *E. persius fredericki*, *P. protodice*, *C. philodice*, *S. callippe*, *P. tharos*, *C. euryphon*, *L. melissa*, *P. saepiolus*, *Everes* sp., *C. tullia*. MOTHS: *Hemaris diffinis*, *Proserpinus juanita*. Picnic Springs, Cave Mountains, Harding Co., 22 June. Area has much Lupine and the following were collected: *H. uncus*, *H. pahaska*, *O. garita*, *M. texanus leussleri*, *P. multicaudatus*, *S. callippe*, *L. melissa*, *P. icaroides*. Black Hills, Localities: (1) 1.7 mi. on road to Telegraph Gulch off 231, 23 June; (2) along the south fork of Rapid Creek, about 10 mi. E. of 85 on 231, 23 June; (3) along Hwy. 85 adjacent to the Wyoming border, Lawrence Co., 23 June; (4) about 11 mi. E. of 85 on 14 along Boulder Cr., Lawrence Co., 24 June; (5) Iron Cr., W. off spearfish Canyon, Lawrence Co., 24 June; (6) just W. of Timon Cr. Campground, Lawrence Co., 24 June; (7) along road into Redbird Cyn., off 117, Custer Co., 25 June; (8) 117 S. of 284 jct., Custer and Pennington Co., 25 June; (9) Jct. of 284 and road to Ice Vace, Pennington Co., 25 June; (10) Roubai Lake, Lawrence Co., 25 June. The following species were collected: *A. simius*-7; *Amb. oslari*-4, 5; *A. vialis*-4, 6; *P. hobomok*-4; *P. origines*-4; *O. garita*-1, 7; *P. catullus*-7; *E. icelus*-1,2,4,6; *E. juvenalis*-4; *E. martialis*-4; *E. persius fredericki*-1,2,3,4,5,6,8,9; *T. pylades*-4; *M. texanus leussleri*-7; *E. clarus*-4; *P. zelicaon*-2, 4; *P. glaucus*-2; *P. eurymedon*-1; *P. phoebus sayii*-1,3,9; *C. philodice*-3, 8; *C. alexandria*-8, 9; *P. protodice*-1,3,6; *P. rapae*-5, 6; *E. ausonides*-1,2,6,9; *C. polios*-1; *eryphon*-2, 4; *G. lygadamus*-1,2,3,4,6; *C. argiolus*-1; *L. melissa*, *P. saepiolus*-1,2,4,8; *P. icaroides*-2,3,4,8; *P. acmon*-1; *A. aquilo*-1,2,3,9; *Everes* sp.-1,2,3,5,8; *L. weidemeyerii*-4, 8; *P. tharos*-1,4,5; *P. batesii*-4,5,7,8; *E. anicia*-2,3,9; *P. zephyrus*-2, 5; *C. cardui*-2; *N. milberti*-2; *E. claudia*-2; *S. edwardsii*-4; *S. atlantis turana*-8; *S. callippe*-7; *S. mormonia*-1,2; *O. uhleri*-1; *C. tullia*-1; *Sphinx vashti*-10.

NEBRASKA: David Prochnow reported from Sarpy County, in the vic. of Bellevue, the following listing of species: *Danaus plexippus*, Aug.-Sept.; *Polites peckius*, Aug.; *Lycaenopsis argiolus*, Aug.; *Vanessa cardui*, July; *V. atlanta*, July-Aug.; *Asterocampa celtis*, July-Sept.; *Polygonia interrogationis*, Aug.; *Euptoieta claudia*, Aug.-Sept.; *Speyeria cybele*, Aug.; *Papilio polyxenes asterius*, June-Aug.; *P. cresphontes*, July-Aug.; *Colias philodice*, July-Aug.; *Phyciodes picta*, Aug. MOTHS: *Hyles lineata*, Nov.; *Chorizagrotis auxiliaris*, Aug.

OKLAHOMA: Jeffrey H. Frey reported the following: *Papilio multicaudatus*, Cimarron Co., 3 1/2 mi. N. Kenten, about half-way up the side of Black Mesa, 28 June; *Strymon edwardsii*, Cimarron Co., Boise City, 26 June; *S. diana*, Mayes Co., 3 mi. S. 1/2 mi. W. Locust Grove, along the roadside nectaring on Thistle, 2 Sept.

TEXAS: H.A. Freeman reports for the area around Dallas that collecting was on a normal cline for this entire region. No unusual species were collected possibly due to the rather cold winter that we had during 1978. Jim Brock reported that he found the following in the western part of Texas: Brewster Co., 7 June, *Limenitis astyanax*, *Megisto rubricata smithorum*, & *Atrytonopsis python margarita*. On the same day in Terrell Co., 8 mi. W. of Sanderson, nr. Emerson the following species were collected: *Asterocampa texana*, *Polygonia interrogationis*, *Phyciodes vesta*, *M. rubricata smithorum*, *P. alcestis oslari*, & *Amblyscirtes phylace*. On the same day large numbers of *Kricogonia castalia* were observed flying in a southerly direction in the Dryden area of Terrell County. Steven E. Peterson, Jr. reported for the area around San Antonio the following species: *Papilio cresphontes*, *P. glaucus*, *P. asterius*, *B. plilenor*, *P. protodice*, *N. iole*, *C. cesonia*, *E. lisa*, *E. nicippe*, *P. sennae*, *K. castalia*, *A. midea*, *C. henrici*, *C. gryneus*, *E. autolytus*, *A. halesus*, *C. isobea*, *B. exilis*, *C. rawsoni*, *L. bachmanii*, *S. occidentalis*, *A. vanillae*, *D. julia*, *D. eresimus montezuma*, *E. cymela*, *E. rubricata*, *E. h. sosybia*, *C. pegala texana*, *E. claudia*, *P. coenia*, *P. vesta*, *V. atlanta*, *P. texana*, *A. antonia*, *A. andria*, *P. phaon*, *M. amymone*, *P. tharos*, *C. nycteis*, *C. t. bolli*, *C. janais*, *L. archippus watsoni*, *L. astyanax*, *C. nessus*, *W. otho*, *P. communis*, *A. campestris*, *H. phyleus*, *C. aurantiaca*, *C. minima*, *S. pulverulenta*, *L. eufala*, *L. accius*, *N. julia*, *A. celia*, *E. metacomet*, *E. horatius*, *P. philetas*, *C. albofasciatus*, *A. numitor*, *P. catullus*, *A. nysa*, *E. clarus*. George W. Busby III reported two species from Texas that are impressive: *Panthiades m-album*, March, Rice University Houston, Harris Co.; *Hamadryas feronia*, 24 Aug., near Mission, Hidalgo Co. Jack B. Prentiss reported the following species from southern Texas: MOTHS: *Thysania zenobia*, Corpus Christi, Oct.; *Rotschildia forbesi*, Harlingen, Aug.-Oct. BUTTERFLIES: *Biblis hyperia aganisa*, Crystal City, Zavala Co., Oct. *Anteos clorinde*, Corpus Christi, Oct. *Anteos maerula*, Harlingen, Oct. *Papilio lycophron*, Harlingen, May. *Papilio palamedes*, Corpus Christi, Sept.-Oct.

ZONE 5: EASTERN-MIDWEST: MISSOURI to MINNESOTA to MICHIGAN. Coordinator: M.C. Nielsen. Contributors: G. Balogh (GB), B. Barrett (BB), R. Boscoe (RB), R. Bracher, J. Brock, C. Burkhardt, T. Carr, P. Conway (PC), W. & A. Duesterbeck (D), F. Fee (FF), L. Ferge (LF), L. Gibson (LG), R. Grothe (RG), D. Hess (DH), G. Holbach (GH), R. Huber (RH), I. Leeuw (IL), C. Lundeen (CL), L. Martin (LM), M. McInnis (MM), W. Miller (WM), M. Minno (MN), M. Nielsen (MN), D. Oosting (DO), J. Parkinson (JP), J. Prescott (P), E. & T. Riley (R), Y. Sedman (YS), E. Shull (ES), E. Voss (EV), R. Webster (RW), J. Weintraub (JW). General Comments: The Midwest was hit by one of the coldest winters of record, extreme cold temperatures and deep snowfalls. Yet, the season was not noticeably retarded in most areas and many collectors reported good collecting again, especially with butterflies. Butterflies reported up in many areas included *B. philenor*, *P. cressphontes*, *N. v-a. j-album* & *Polygona interrogationis*, while *P. troilus* was down throughout much of its range. Many southern species were reported from northern areas in unusual numbers which included *A. campestris*, *H. phyleus*, *C. cesonia*, *L. bachmanii* & *J. coenia*. *C. palaeogama* was extremely common and swarmed along Lake Michigan beaches. An asterisk (*) indicates a new county record and/or range extension.

MISSOURI: Grothe found the season to be as good as 1977 in the St. Louis area; collecting started on 10 Apr., but didn't peak until 26 Apr. Common species were: *A. midea*, *C. henrici turneri*, *E. ontario*, *S. caryaeovorus*, *S. cybele* & *E. cymela*. *B. bellona*, a STATE RECORD last year, is well-established and locally common. *C. cesonia* & *E. phaeton ozarkei* were down in numbers. Riley's found *A. andria* virtually everywhere in central counties, especially nr. Columbia. **CHOICE BUTTERFLIES:** *E. dukesi*, 22 June, St. Charles* Co. (RG); *P. zabulon*, 11 May, St. Charles* Co. (RG); *H. metea*, 26 Apr., St. Louis* Co. (RG); *H. ottoe*, 30 June, Holt* Co. (loess 'mounds' prairies-R); *A. cellus*, 3 June, St. Louis Co. (RG); *P. joanea*, 26 Apr., St. Louis Co. (1 ♀-RG); *P. sennae marcellina*, 28 Aug., St. Charles* Co. (RG); *A. midea* & *E. olympia*, 23 Apr., Benton Co. (abundant-R); *C. muticum*, 28 Aug., Meramac St. Pk. (RG); *S. caryaeovorus*, 24 June, St. Louis* Co. (1st in E. Mo. since 1895-RG); *C. henrici turneri*, 2 Apr., Warren* Co. (RG); *C. niphon*, 15 Apr., Maries Co. (R); *E. ontario*, 29 May, St. Genevieve* Co. (RG); *P. m-album*, 24 June, St. Louis Co. (RG); *L. x. dione*, 12-30 June, Holt, Vernon Cos. (R); *C. lygdamus* ssp., 26 Apr., St. Louis Co. (RG); *S. idalia*, 12-21 June, Barton, Dade, Jasper, Pettis, Polk, St. Clair, Vernon Cos. (prairies on purple cone fl.-R); *A. clyton*, 13 June, Boone Co. (abundant-R). **CHOICE MOTHS:** *E. pulcherrima*, 22 May, St. Charles* Co. (RG). **FOODPLANTS:** *B. bellona*, first rearing from state stock on *Viola* sp. (RG).

KENTUCKY: An early spring followed an unusual bitter winter. Spring (except for a local snow in mid-April which foiled collecting trip of Soc. of Ky Lepid.) and summer were normal with excellent collecting--79 species of butterflies, 39 species of Catocala. *I. lineola* was abundant on June in Boone Co.; *A. campestris* & *H. phyleus* were much reduced, while several *P. cressphontes* were seen in Boone, Campbell & Kenton Cos. in June-Aug. **CHOICE BUTTERFLIES:** *P. virginensis*, 10-29 Apr., Harlan, Menifee, Powell Cos. (GB, LG, DO); *E. nicippe*, 2 Sept., Allen Co. (BB); *C. cesonia*, mid-Sept., Gallatin Co. (new colony in '77 thriving-LG); *A. midea*, 21, 22 Apr., Harlan, Menifee Cos. (GB, LG); *E. laeta*, 14 Apr., 1-4 July, Harlan Co. (Black Mtn.-LG, DO); *C. ebenina*, 10-29 Apr., Harlan*, Menifee, Powell Cos. (GB, LG, DO); *L. hyllus*, 26 Sept., Allen Co. (BB); *A. vanillae*, 25 Sept., Warren Co. (BB); *B. bellona*, 22 Apr., 26 Sept., Allen*, Harlan, Menifee Cos. (BB, GB, LG). **CHOICE MOTHS:** *P. astylus*, 6 Aug., Metcalfe* Co. (3 immac., 2nd STATE RECORD-BB); *E. pandorus*, 6 Aug., Metcalfe Co. (BB); *C. agrippina*, 18 Aug., Fulton Co. (2nd STATE RECORD-LG); *C. ulalume*, 23 July, Wayne Co. (LG); *C. insolabilis*, 7 July, Meade Co. (LG); *C. maestosa*, 12 Aug.-2 Sept., Boone, Fulton, Meade Cos. (LG); *C. marmorata*, 17 Aug., Lyon Co. (LG); *C. gracilis*, 21 July, Laurel Co. (with basal dash-LG); *C. mira*, 27 July, Boone Co. (LG). **STATE RECORDS:** *L. portlandia missarkae*, 27 May, Fulton Co. (pair-R. Henderson-LG); *C. sappho*, 22 July, Wayne Co. (LG). **FOODPLANTS:** *C. ebenina*, 13, 14 May, Powell Co., ova and 1st instar larvae on *Aruncus dioicus*; cannibalism high among 4th-6th instars (JW).

WEST VIRGINIA: Prescott, in Randolph and Taylor Cos., first two weeks in June, reported the following common: *P. themistocles*, *A. numitor*, *E. clarus*, *P. g. glaucus* & *troilus*, *L. a. astyanax*, *P. interrogationis* & *E. cymela*. Weintraub found good moth collecting, especially Saturniidae, around Danville area lights on 18 July. **CHOICE BUTTERFLIES:** *A. vialis*, mid-June, Randolph Co. (P); *C. interior*, 8 July, Pendleton Co. (Spruce Knob, 4800'-RB); *P. m-album*, 11 May, Hampshire Co. (FF); *C. harrisii*, 8 July, Pendleton Co. (RB); *C. nycteis*, 9, 10 June, Randolph Co. (P); *B. bellona* toddi, 18 July, Boone Co. (JW); *S. diana*, 18 July, Lincoln Co. (roadkill-JW). **CHOICE MOTHS (JW):** *D. versicolor*, *C. angulifera*, 18 July, Boone Co.; *C. regalis*, 18 July, Boone Co. (♂♂ common); *C. sepulchralis*, 18, 19 July, Lincoln Co. (3 m.); *E. imperialis*, & ♀ *didyma*, 18 July, Boone Co. (♂♂ common). **FOODPLANTS:** *C. interior*, confined ♀ oviposited on *Vaccinium corymbosum*; larvae fed for several weeks before diapause; *P. m-album*, confined ♀ oviposited on *Quercus alba*, and produced 137 ova (50 sterile) over 30 days (FF).

OHIO: Martin reported on butterflies in north-central Ohio and experienced an extremely harsh winter with blizzards, record snowfalls and extended periods of below freezing temperatures. Butterflies were not seen until early April; yet, the season developed into a very good collecting year. **CHOICE BUTTERFLIES (LM):** *E. conspua*, *dukesi*, 22 July, Lorain Co.; *P. viator*, 16 July, 20 Aug., Huron*, Lake* Cos. (feeding on *Liatris spicata*); *H. phyleus*, 22 Sept., 22 Oct., Huron*, Lorain Cos.; *B. philenor*, 22 Oct., Lorain Co. (late date); *G. marcellus*, 23 May, reared from ova, larvae collected in '77; *P. cressphontes*, 3 Aug., Lorain Co. (12 seen, most in over 20 yrs.); *P. virginensis*, 29 Apr., Cuyahoga, Medina Cos. (with D. Currutt); *C. nycteis*, 24 June, Cuyahoga Co.; *S. idalia*, 19 Aug., Huron* Co.; *L. appalachia leeuwi*, Huron, Lorain Cos. (several colonies in wooded areas). **CHOICE MOTHS (all Lucas Co.-Carr):** *E. ello*, 29 Aug.; *C. angulifera*, 20 July (1 ♂ at light); *C. piatrix*, 24 Aug.; *C. epione*, 2-8 Aug.; *C. residua*, 8 Aug.; *C. cerogama*, 13-25 Aug.; *C. mira*, 14-19 July; *C. minuta*, 8, 9 July.

INDIANA: Minno found the season good, recording 67 butterfly species and many moths. He found *S. edwardsii*, *L. bachmanii* & *C. palaeogama* up in numbers. Shull, collecting from 23 March to 11 Nov., collected 91 species of butterflies and 123 species of moths. Burkhardt, collecting and observing butterflies in Elkhart Co. for the 4th consecutive year, reported a drought in Aug. and decrease in numbers of lepidoptera; especially down over previous years were *L. hyllus*, *helioides*, *L. bachmanii* & *Polygona*. He found *P. cressphontes*, *V. cardui* & *J. coenia* more numerous. Reporting from the South Bend area, Bracher found butterflies more common than in any of the previous 18 years! Especially numerous was *P. glaucus*; he observed many adults feeding on his rhododendron and privet flowers during June. He successfully sleeved a yellow and a black ♀ *glaucus* on wild black cherry and obtained 50 chrysalids of each form. **CHOICE BUTTERFLIES:** *L. eufala*, 1 June, Brown Co. (ES); *E. bimacula*, 8 July, Brown Co. (ES); *P. byssus*, 14-19 July, Benton, Tippecanoe Cos. (M); *P. mystic*, 4 June, Wabash Co. (ES); *H. phyleus*, 10 Aug., Wabash Co. (ES); *N. l'herminier*, 8 June-10 July, Martin, Posey Cos. (M); *E. icelus*, 28 July, Wabash Co. (late date-ES); *A. cellus*, 7 July, Brown Co., State Pk. (2nd STATE RECORD-ES); *P. protodice*, 4 July, LaGrange Co. (ES); *P. s. eubule*, 31 May, Brown Co. S.P. (ES); *A. midea*, 30 Apr.-29 May, Brown, Martin Cos. (M); *C. cecrops*, 27 May-7 June, Lawrence, Monroe Cos. (M); *C. h. turneri*, 29 Apr., Monroe Co. (M); 31 May-1 June, Brown Co. S.P. (late date-ES); *C. niphon clarki*, 27 May, Monroe Co. (M); *C. gryneus*, 9-11 July, Perry, Washington Cos. (M); *E. ontario*, 28 June, Kosciusko Co. (late date-ES); *F. tarquinius*, 28 July, Tippecanoe Co. (M); *L. dorcas*, 11 July, LaGrange Co. (DH); *L. melissa samuelis*, 29 July, Porter Co. (M); *C. lygdamus* ssp., 19 May, Lake Co. (IL); *L. bachmanii*, 19 June-10 July, Huntington, Posey Cos. (M, ES); *E. claudia*, *S. idalia*, 16 Aug., Howard Co. (ES); *J. coenia*, 29 July, Porter Co. (M); *E. phaeton*, 14 June-16 July, LaGrange, Wabash Cos. (M, ES); *L. appalachia leeuwi*, 4 July, LaGrange Co. (ES); *C. pegala alope*, 4 July, *C. p. olympus*, 11 July, LaGrange Co. (confirmed by D. Hess-ES). **CHOICE MOTHS:** *S. canadensis*, 12 July, Lawrence Co. (M); *S. luscitiosa*, 4 July, LaGrange Co. (M); *A. luna*, 7 July, Brown Co. S.P. (ES); *A. figurata*, 7 June, Lawrence Co. (M); *P. spraguei*, 30 May, Tippecanoe Co. (M); *E. pulcherrima*, 26 June, Tippecanoe Co. (M); *P. morigera*, 6 June, Lawrence Co. (M); *E. obtusaria*, 23 Aug., Kosciusko Co. (ES); *L. chiridota*, 7 June, Lawrence Co. (M); *N. ovina*, 10 July, Lawrence Co. (M). **STATE RECORDS:** *A. samoset*, 8 June, Martin Co. (M); *L. marina*, 29 July, Porter Co. (M); *C. ebenina*, 29 Apr., Monroe Co. (larvae reared on *A. dioicus*, 24 May; one attended by an ant-M); *L. confederarum*, 8 July, Brown Co. S.P. (1 ♂-ES).

ILLINOIS: Hess and Sedman, reported from west-central counties, experienced a severe winter, followed by a late spring and a 2-3 week gap that persisted all summer. They recorded 88 butterfly species and found notable population increases with *A. campestris*, *H. phyleus*, *P. cressphontes*, *P. s. eubule*, *L. bachmanii*, *A. andria* (late Apr.-May), *C. gorgone carlota* (spring brood), *C. nycteis*, *S. cybele*, *V. cardui*, *J. coenia*, *A. celtis* & *clayton*; species down in numbers were *P. zabulon*, *P. troilus* & *P. protodice*. *A. luna*, *T. polyphemus* & *E. imperialis* were quite common. Conway recorded 42 species of butterflies on 5 July at the Sand Ridge State Park, Mason Co., and sadly reported the total destruction of one of the BEST colonies of *H. ottoe* on private land adjacent to the Park. Leeuw observed *C. palaeogama* literally swarming at the Illinois Beach State Park, along with other 'cats' on just about every tree in the area.

CHOICE BUTTERFLIES: *P. byssus*, 4 July-2 Aug., Hancock*, Henderson, McDonough Cos. (DH, J. Howe, YS); *P. viator*, 9 July, Cook Co. (IL); *P. origines*, 9 June, Cass* Co. (DH); *P. mystic*, 13 June, McHenry Co. (IL); *H. metea*, 18 May, Greene Co. (2nd STATE & COUNTRY RECORD, confirmed by W. McGuire-YS); *H. ottoe* ssp., 5 July, Mason Co. (PC), 29 July, Winnebago* Co. (Harlem Hills Nature Pres.-GB); *H. sassacus*, 11 June, Iroquois Co. (2nd record from Conservation Area-PC); *E. baptisiae*, 29 July, Winnebago* Co. (GB); *P. protodice*, 30 July, Carroll, Whiteside Cos. (GB); *C. cesonia*, 4 July-8 Oct. (? *rosa*), Hancock*, Henderson, Lake, McDonough, Pike Cos. (DH, J. Howe, IL); *E. nicippe*, 4 Sept., Cass, Pike Cos. (DH); *S. acadica*, 4 July, Kane Co. (IL); *C. h. turneri*, 26 Apr.-22 May, Greene, McDonough Cos. (det. by Lee Miller-DH, YS); *E. ontario*, 21 June, Hancock* Co. (on Dogbane-YS); *L. x. dione*, 4-16 July, Pike Co. (DH); *L. marina*, 30 July, Carroll* Co. (Ayers Sand Prairie N.P., 1 ♀-GB); *F. tarquinus*, 21 May, 9 Aug., McDonough Co. (DH); *N. milberti*, 3 Apr., 31 Aug.-4 Sept., McDonough Co. (R. Stanek, YS); *B. bellona*, 18 May-16 July, Cass, Hancock* Cos. (DH, J. Howe, YS); *E. phaeton ozarkee*, 18 June, Hancock* Co. (♀ on smooth sumac blossom-YS); *S. idalia*, 4-30 July, Carroll, Pike* Cos. (GB, DH).
CHOICE MOTHS: *E. achemon*, 9 Aug., McDonough Co. (DH); *C. hageni*, 11 June-11 July, Hancock Co. (J. Howe); *A. bicolor*, 21 June-5 July, Hancock Co. (J. Howe, YS); *A. exilis*, 21 May, McHenry Co. (IL); *E. electilis*, 18 Apr., McHenry Co. (IL); *A. urentis*, 21 May, McHenry Co. (IL); *C. lacrymosa*, 22 July, Lake Co. (IL); *C. ithacae*, 9 Aug., McHenry Co. and M. cucurbitae, 1-4 July, Kane Co. (Sesiidae det. by J. Holoyda-IL).
FOODPLANTS (DH): *P. s. eubule*, 4 Sept., Pike Co., larvae on *Cassia marilandica* along slough; *C. cardui*, 9 Aug., McDonough Co., oviposition on Bull Thistle, *Cirsium lanceolatum*; *P. interrogationis*, 1 Aug., McDonough Co., oviposition on Chinese Elm.

IOWA: Balogh collected in Howard Co., Hayden Prairie on 29 June, and recorded *P. mystic* (few, worn), *O. powesheik* (common, fresh), *S. acadica*, *B. bellona* & *selene*. Brock, on 22 June 13.5 mi. E. of Creston, Union Cp., collected *P. verna*, *S. c. falacer* & *edwardsii*; on 27 June, 5 mi. E. of Spencer, Clay Co. he took *H. titus*, *L. hyllus*, *C. nycteis*, *B. bellona*, *S. aphrodite* & *L. e. fumosus*.

MINNESOTA: Huber and Lundeen reported also for 10 additional collectors. Their season got off to a poor start because of poor weekend weather causing them to miss many of the spring butterflies; a total of 99 butterfly species was recorded.
CHOICE BUTTERFLIES: *L. eufala*, 9 Sept., Pipestone Co. (R. Dana); *A. hianna*, 27 May-8 June, Big Stone*, Lac Qui Parle*, Renville*, Sherburne* Cos. (Dana, CL); *A. arogos*, 1 July, Lac Qui Parle* Co. (CL); *H. uncas*, 28 June, Lincoln Co. (Dana); *H. pawnee*, 23-29 Aug., Clay, Murray* Cos. (Dana, IL); *H. ottoe*, 11 July, Pipestone* Co. (Dana); *H. dacotae*, 27. 28 June, Clay Co. (GB); *H. leonardus-pawnee*, 21 Aug., Sherburne Co. (IL); *O. powesheik*, 27 June-1 July, Big Stone*, Clay Cos. (GB, RH); *C. palaemon mesapano*, 10-18 June, Aitkin, Lake, Pine* Cos. (GB, RH); *E. brizo* (13 May, Wabasha* Co. (Dana); *E. lucilius*, 21 July-19 Aug., Winona* Co. (CL, L. Melton); *S. boreale*, 26 June, Winona* Co. (Melton); *C. gryneus*, 16 May-3 June, Le Sueur*, Wabasha* Cos. (Dana, H. Hertel, RH, CL); *F. tarquinus*, 11 June, 19 Aug., Winona* Co. (K. Laska, Melton); *P. m. melissa*, 3-28 June, 7-23 Aug., Clay, Douglas*, Jackson*, Le Sueur*, Polk* Cos. (GB, Dana, RH, IL, CL); *P. m. samuelis*, 21 July-19 Aug., Winona* Co. (RH, Melton); *H. isolata*, 19 Aug., Winona* Co. (RH); *A. clyton*, 1 July, Renville* Co. (RH); *B. freija* ssp., 21 May, Itasca* Co. (R. Bartelt); *B. eunomia dawsoni*, 18 June, Aitkin Co. (GB); *O. macounii*, 17 June, Lake Co. (GB).

WISCONSIN: Ferge recorded 87 butterfly species, similar to last 2 years. Spring weather was uneventful, with most species emerging about as expected. Butterflies were plentiful all summer and choice species were discovered in new localities and old and dubious records were verified. *N. v-a j-album*, *P. faunus*, *satyrus neomarsyas* & *C. g. carlota* were up in numbers; many were taken in bait traps. *Speyeria* were down while southern migrants, *A. campestris*, *P. cressphontes*, *J. coenia* & *E. claudia* were present in good numbers in southern counties during Aug. Duesterbecks reported *P. napi* and hairstreaks abundant in Chippewa and Eau Claire Cos., while *L. m. samuelis* was rather scarce. Cold autumn weather from mid-Sept. undoubtedly resulted in poor late-season moth collecting.

CHOICE BUTTERFLIES: *A. hianna*, 28 May-18 June, Adams, Burnett Cos. (GB, LF); *A. campestris*, 19 Aug.-20 Oct., Grant*, Green*, Rock* Cos. (GB, LF); *P. origines*, 29 June-29 July, Dane*, Green* Pierce*, Sauk, Waukesha Cos. (GB, JP); *H. ottoe* ssp., 15-29 July, Dane*, Grant, Green* Cos. (GB, LF, IL); *H. leonardus-pawnee*, 23 Aug.-4 Sept., Columbia*, Dane*, Green Cos. (Prairie-GB, LF); *H. phyleus*, 1 Oct., Waukesha* Co. (1 ♀-GB); *T. lineola*, 23 June, Dane* Co. (LF, JP); *O. powesheik*, 4 July, Waukesha* Co. (rediscovery since 1906-GB); *C. palaemon mesapano*, 4 June, Monroe* Co. (bog-LF); *E. lucilius*, 21 May, 16 July-27 Aug., Dane*, Eau Claire, Grant Cos. (GB, D, LF, IL); *P. protodice*, 18 June-2 Sept., Burnett, Eau Claire, Oconto, Sauk Cos. (GB, LF); *P. virginensis*, 22 May, Forest Co. (GB); *C. cesonia*, 4 July-19 Sept., Eau Claire, Grant Waukesha Cos. (GB, D, LF); *N. iole*, 24 Sept.-1 Oct., Waukesha* Co. (GB); *C. gryneus*, 16-29 July, Grant, Green*, Sauk Cos. (GB, LF, IL JP); *C. irus*, 28 May, Adams Co. (GB); *C. polios*, 6-22 May, Eau Claire, Oneida*, Vilas* Cos. (GB, D, LF); *L. x. dione*, 23-29 June, Grant, Pepin* Cos. (GB, JP); *L. marina*, 16 July, Grant* Co. (2nd STATE RECORD since 1906, 2 spec. coll. by R. Borth-GB); *L. argyrognomon nabokovi*, 9-15 July, Florence, Oconto Cos. (GB, LF); *L. m. samuelis*, 28 May-18 June, 23 July, Adams, Burnett, Eau Claire, Monroe*, Wood Cos. (GB, D, LF, JP); *P. s. neomarsyas*, 15 July-3 Sept., Florence, Iron* Cos. (LF); *C. g. carlota*, 28 May-27 Aug., Adams, Eau Claire, Grant*, Green*, Sauk* Cos. (GB, D, LF); *B. freija* ssp., 20-27 May, Langlade*, Oneida Cos. (GB, LF, DO, JP); *B. frigga* ssp., 27 May-3 June, Iron*, Langlade, Oneida* Cos. (LF, JP); *B. e. dawsoni*, 3-18 June, Chippewa, Langlade Cos. (worn-LF); *E. claudia*, 29 May-27 Aug., Eau Claire, Grant, Green Lincoln* Cos. (GB, D, LF); *L. bachmanii*, 26 Aug., Green* Co. (LF); *O. jutta ascerta*, 21 May-16 June, Chippewa, Douglas, Langlade, Monroe* Cos. (GB, D, LF, JP); *O. chryxus strigulosa*, 21, 22 May, Langlade, Oneida*, Vilas* Cos. (GB, LF, JP); *E. discoidalis*, 20-27 May, Iron, Langlade, Oneida Cos. (GB, LF, DO JP).

CHOICE MOTHS: *S. canadensis*, 22 June-31 July, Marathon, Oneida, Sheboygan Cos. (LF, GH); *S. eremitus*, 8-14 July, Sheboygan Co. (GH); *D. inscripta*, 26 Apr.-6 May, Dane, Sheboygan Cos. (LF, GH); *H. columbia*, 17 June, Oneida Co. (attracted to *cecropia* ♀-LF); *A. caja americana*, 12 Aug., Oneida Co. (LF); *N. opacifrons*, 12 Aug., Oneida Co. (LF); *A. cordigera*, 21, 22 May, Langlade, Vilas Cos. (GB); *O. alurina*, 7-22 Apr., Dane, Sauk Cos. (at bait-LF); *L. disposita*, 31 March-9 Apr., Dane, Milwaukee Cos. (GB, LF); *E. devia*, 31 March-26 Apr., Milwaukee, Sauk Cos. (GB, LF); *C. innubens*, 19 July, Iowa Co. (LF); *C. serena*, 25 July-25 Aug., Dane Co. (GB, LF); *C. subnata*, 29 July-3 Aug., Dane Co. (bait trap & UV-LF); *C. amestris*, 17 July, Dane Co. (BT-LF); *C. coccinata*, 31 July-2 Aug., Sheboygan Co. (GH).

MICHIGAN: The state experienced the coldest winter in 93 years; most of the snow had disappeared by mid-March in the southern portion. The unusual cold winter appeared to have little effect on lepidoptera populations and spring emergences. Nine collectors submitted various comments and reports dealing mainly with butterflies; a total of 97 butterfly species were recorded, about as many as last year. *B. philenor*, *P. cressphontes* & *P. interrogationis* were especially common in southern areas. Oosting found *Callophrys*, especially *irus*, much reduced in numbers or absent in west and central counties, where they are usually abundant or common. Three collectors enjoyed a good season taking *Catocala* with bait traps and UV, recording a total of 36 species; Nielsen found *piatrix*, *subnata* & *palaeogama* noticeably up in numbers.

CHOICE BUTTERFLIES: *E. dukesi*, 26 July, Monroe Co. (JW); *H. comma laurentina*, 24 July, Chippewa, Mackinac Cos. (IL, MM); *H. ottoe* ssp., 27 June-28 July, Allegan Co. (IL, DO); *P. centaureae wyandot*, 19-26 May, Montcalm, Otsego Cos. (MN, DO); *P. protodice*, 3-6 Sept., Houghton Co. (J. Perona); *P. virginensis*, 19-29 May, Iron, Marquette*, Ontonagon Cos. (MN, DO); *C. muticum*, 15-27 July, Jackson, Shiawassee Cos. (MN, JW, RW); *S. caryaeavorus*, 30 June-16 July, Allegan*, Barry*, Cass, Kent, Lenawee Cos. (DO); *C. henrici* ssp. 27 May, Barry*, Schoolcraft Cos. (MN, RW); *F. tarquinus*, 4-19 Aug., Lenawee, Monroe* Cos. (M. Grocoff, MN); *L. epixanthe michiganensis*, 20 June-10 July, Kent* Co. (DO); *L. m. samuelis*, 28 May, 15-28 July, Allegan, Montcalm Cos. (IL, MN); *L. bachmanii*, 10 Aug., Berrien* Co. (RW); *N. v-a j-album*, 15 July, Jackson* Co. (JW); *P. s. neomarsyas*, 10 Aug., Mackinac Co. (MM); *P. batesi*, 4 June, Wexford* Co. (RW); *B. freija* ssp., 18-27 May,

Iron Co. (MN, DO); *B. frigga* ssp., 27 May-14 June, Iron, Keweenaw, Schoolcraft Cos. (MN, DO, Perona); *E. claudia*, 5 Aug., Newaygo Co. (RW); *S. idalia*, 10 Aug., St. Joseph Co. (JW); *E. mitchellii*, 12-15 July, Jackson Co. (JW); *C. inornata*, 17-25 June, Cheboygan, Presque Isle* Cos. (MN, DO); *O. c. strigulosa*, 19-29 May, Iron, Newaygo Cos. (IL, MN, DO).
 CHOICE MOTHS: *S. luscitiosa*, 1 June, Otsego Co. (MN); *H. gracilis*, 28-30 May, Montcalm, Otsego* Cos. (WM, MN); *H. columbia*, Montcalm Co. (3 ♂♂ attracted on 3 consecutive nights to caged *cecropia*, 8-F. Hedges); *S. bicolor*, 11 Aug., Lenawee Co. (MN); *F. major*, 18 May, Iron* Co. (MN); *C. chlorostigma*, 1 July, Lenawee Co. (1 in bait trap-MN); *L. thaxteri*, 13 Nov., Otsego* Co. (MN); *P. speciosissima*, 20 Sept., Clinton Co. (MN); *C. judith*, 27 July, Roscommon* Co. (IL); *C. piatrix*, 11 Aug.-2 Sept., Lenawee Co. (MN); *C. nebulosa*, 11 Aug.-2 Sept. (MN); *C. subnata*, 23 July-2 Sept., Lenawee, Shiawassee Cos. (MN, B. Wilson); *C. cara*, 16 Sept., Emmet* Co. (EV); *C. illecta*, 1 July, Lenawee Co. (1 in BT-MN); *C. coccinata*, 2 July, Lenawee* Co. (MN); *C. mira*, 22 July, Cheboygan* Co. (EV). STATE RECORD: *Dargida procinctus*, 9 July, Houghton* Co. (J. Perona).
 FOODPLANT: *E. olympia*, 24 June, Cheboygan Co., many last instar larvae found on *Arabis drummondii* (MN).

ZONE 6: SOUTH: ARKANSAS, LOUISIANA, TENNESSEE, MISSISSIPPI, ALABAMA, FLORIDA, GEORGIA, S.&N. CAROLINA, VIRGINIA.
 Coordinator: H.D. Baggett (HDB). Contributors: Jim Brock (JB), Daniel L. Burris (DLB), Terhune S. Dickel (TD), Frank D. Fee (FDF), Irving L. Finkelstein (ILF), Rick Gilmore (RG), Bob Godefroi (BG), Dave Hess (DH), Larry A. Hill (LAH), Edward Jennejohn (EJ), Rick Kergosian (RK), Leroy Koehn (LK), Bryant Mather (BM), Peter May (PM), Leo J. Paulissen (LP), Steve Roman (SR), Jeff Slotten (JS), Richard H. Smith (RHS), Abner Towers (AT), Paul Tuskes (PT), Charles Watson (CW), John Watts (JW), Howard V. Weems (HVW), David M. Wright (DMW), and C.F. Zeiger (CZ).
 USA, STATE, COUNTY, in caps., are new records; NORTH, SOUTH, etc., in caps., are new range extensions.

ARKANSAS: Conditions: LP reported for Washington Co. & vic. that NW. Arkansas experienced another severe winter, accompanied by a late spring, a dry summer, and a mild fall lasting into December.

MIGRATORY SPECIES: The *D. plexippus* migration was good; where most were observed headed due west in 1977, this season the first individuals were observed headed west, but by the end of the flight period 50% were observed headed due south.

MOTHS: SPHINGIDAE: Only two larvae of *Pogocolon juanita* were found.

BUTTERFLIES: Only 81 of 119 species known from Washington Co. were observed in 1978, with no reports of strays. The first to appear was *A. andria*, 11 March; *A. carolina* was taken 1 July (DH) for the second STATE RECORD. Comments: LP reported that *G. lygdamus*, *P. phaon*, & *L. bachmanii* were most abundant than normal; despite severe winter devastation of the host plants, *E. phaeton ozarke* appeared in good numbers; *E. ontario* was again reported, but no *S. liparops* were seen.

LOUISIANA: JB reported taking *L. archippus watsoni* at Lafayette, Lafayette Parish, 10 June in good numbers.

TENNESSEE: Conditions: CW reported a late spring season, accompanied by adequate rainfall, which helped produce good summer conditions; the fall period was mild but dry.

MIGRATORY SPECIES: *V. cardui*, 3 May (this is generally a fall visitor in Tenn.); *P. coenia* observed between late summer and early fall.

BUTTERFLIES: CW reported 64 species from Sullivan, Hawkins, Carter, Unicoi, Jefferson, & Washington Counties: *P. hobomok*, Hawkins Co., 20 May; *W. egemet*, Sullivan Co., 25 June, & Unicoi Co., 29 July; *H. phyleus*, Washington Co., 17 Oct., & Sullivan Co., 29 Oct.; *P. communis*, Washington Co., 17 Oct.; *A. lyciades*, Sullivan Co., 4 Sept.; *C. gryneus*, Sullivan Co., 3 May; *C. niphon*, Sullivan Co., 11 May; *C. cecropis*, Hawkins Co., 17 Aug.; *F. tarquinius*, Hawkins Co., 25 June & 17 Aug.; *L. phlaeas*, Jefferson Co., 23 Sept.; *A. clyton*, Kingsport, Sullivan Co., 2 Sept.; *C. nycteis*, Hawkins Co., 28 July & Washington Co., 2 Aug.; *S. aphrodite*, Unicoi Co., 28 July; *S. diana*, Washington Co., 2 Aug., Unicoi Co., 28 July, Carter Co., 20 Aug. (preceding records for ♂♂'s only), Sullivan Co., 27 Aug. (1 ♀); *E. claudia*, Sullivan Co., 6 June; *L. p. anthedon*, Unicoi Co., 28 July; *E. hermes sosybia*, Sullivan Co., 27 Aug. Comments: The spring brood of *P. polyxenes asterius* was up from last season; *P. virginianensis*, *A. mideia*, & *C. h. henrici* were all locally common Apr.-May; *C. pegala*, *E. olympia*, *E. nicippe*, & *E. lisa* were scarce or absent in 1978. *B. bellona* was observed in the first reported spring brood in eastern Tenn.; common from 8 Apr. through early May, with the second brood on the wing from early June into August. Predation: 4 pupae of *N. antiopa* collected from buildings at E. Tenn. State Univ. produced only Tachinid flies; *B. bellona*, *S. melinus*, *A. delaware*, & *A. campestris* were observed captured by ambush bugs (Phymatidae).

MISSISSIPPI: MOTHS: SPHINGIDAE: BM reported 28 species, including the second state record for *E. ello*, Vickburg, 24 Aug.; *S. franckii*, Warren, Aug.; *C. hageni*, Warren, July-Aug.; *E. intermedia*, Warren, Aug.; *E. fasciatus*, Warren, Aug.-Sept.; *S. abbotti*, Warren, Apr.; *X. tersa*, Warren & Hancock, June-Oct. CUCULLIIDAE: *Neogalea esula*, Bay St. Louis, Hancock Co. (STATE), 26 May, (RK); *Lithophane viridipallens*, Vicksburg, 28 Feb. (second state record) (BM); *Arzama densa*, Bay St. Louis, Hancock Co., 6-9 June (RK). GEOMETRIDAE: *Tacparia zalissaria*, Gulfport, March-Apr. (RK).

ALABAMA: No reports.

FLORIDA: Conditions: HDB reported that Fla. experienced its second consecutive harsh winter, followed by an unusually late spring in the northern counties. Good rainfall aided most species; summer was typical, with a moderate fall lasting well into December.

MIGRATORY SPECIES: *P. sennae eubule* was abundant in the northern counties between Aug.-Nov.; *V. cardui* was reported from Levy, Duval, & St. Johns Cos., late summer & fall for the first time in several seasons; *P. phileas* & *H. charitonius tuckeri* were observed in the northern counties this fall for the first time in two seasons in numbers. THREATENED SPECIES: Populations of *P. aristodemus ponceanus* were quite low, with few reports during May-June from Monroe Co. This species has received the support of both State & Federal authorities for protection: laws now forbid sale or trade of specimens, and immatures may only legally be taken with permits for research purposes; adults may be taken, but discretion is advised. There were no reports received for *P. andraemon bonhoteti*.

MOTHS: SATURNIIDAE: *H. cecropia*, locally common in Duval & Liberty Cos., late March-Apr. (HDB), cocoon found in Putnam County (JS); *C. securifera*, Duval Co., July, as cocoons on *Gordonia lasianthus* (HDB), as cocoons on *Magnolia virginiana*, Alachua Co. (JS), 4 ♀♀'s at Blackwater River State Pk., Okaloosa County, 1-3 Sept. (JS); *H. maia* adults in mating flights, Duval & Volusia Cos., Jan. (HDB, RG); *C. angulifera*, Torreya St. Pk., Liberty Co., Apr., May & Aug. (HDB). SPHINGIDAE: 38 spp. reported from Fla. this season: *S. abbotti*, Duval, Clay & Seminole Counties, March-June (Seminole = SOUTH) (CZ, SR); *P. astylus*, Torreya St. Pk., Liberty Co., 31 Aug. (JS); *C. jasminearum*, Torreya St. Pk., May-Aug. (HDB, JS); *P. ficus*, *P. labruscae*, *P. caicus*, *P. carteri*, *M. pseudothyreus*, *X. pluto*, *X. tersa*, *E. ello*, *E. obscura*, *E. alope*, *C. grotei*, *E. lugubris*, & others over flowers of *Asystasia gangetica* at dusk, Key Largo, Monroe Co., 25 Nov. (HDB). NOCTUIDAE: *Erebos odorata*, abundant at bait, Homestead, Dade Co., 16-18 May, Jacksonville, Duval Co., July (JW); 37 *Catocala* spp. reported: *C. jair*, Volusia Co. (RG); *C. miranda* (STATE), *C. orba* (STATE), *C. texarkana* (STATE), *C. coccinata*, *C. insolabilis*, *C. louisae*, *C. grisatra*, *C. similis*, Torreya State Park, May (HDB, SR, RG, CZ); *C. neogama* (STATE), *C. nebulosa*, *C. ulalume*, *C. amatrix*, Torreya State Pk., Aug. (HDB, RG); *Metaxaglaea semitaria*, Jacksonville, Duval Co. (STATE), Nov. (HDB). ARCTIIDAE: *Apantesis virgo*, Gainesville, Alachua County, 20 Oct. (JS); *E. phasma*, Seminole Co., March (RG); *H. clymene*, Torreya St. Pk., 15 July (HDB). CTENUCHIDAE: *Empyreuma affinis* (USA, STATE), Broward & Palm Beach Counties, Feb.-July (EJ, HWV); TD reported the following from Homestead, Dade County: AGERIIDAE: *Vitacea polisitififormis seminole* (SOUTH), 19 Sept.; COSSIDAE: *Cossula magnifica* (SOUTH, 5 Aug.; PYRALIDAE: *Undulambia rarissima*, 6 Oct.-2 Nov. (five specimens, the second record for the species).

BUTTERFLIES: 149 spp. were reported in 1978, a very good season: PAPILIONIDAE: *B. polydamas lucayus*, common in orange groves, San Mateo, Putnam Co., 17 June (HDB); *P. androgeus*, a ♀ near Cooper City, Broward Co., 5 Sept. (ILF). NYMPHALIDAE: *P. comma* (confirmational STATE & COUNTY), Gainesville, Alachua Co., March-Apr. (BG); Otter Creek, Levy Co., 22 Apr. (JS); Torreya St. Pk., Liberty Co., 27-28 May (CZ); Black Creek & US 17, Clay Co., 17 May 1977 (HDB); Torreya St. Pk., 8 Aug. 1977 (RG); *Nymphalis vau-album* (a stray) (STATE), Winter Springs, Seminole Co., 26 Feb. (SR); *Hamadryas februa diasia* (STATE, USA), PT reported this from Plantation Key, Monroe Co., on 5 July, and on Key Largo, Monroe Co., 16 July; *Phyciodes texana seminole*, Jacksonville, Duval County, 1 Apr. (HDB) and Green Cove Springs, Clay County, 12 Nov. (CZ); *P. frisia*, locally common, Plantation Key, Monroe Co., 7 Nov. (PT); *E. tatila tatilista*, Upper Matucumbe Key, Monroe Co., common May & Nov. (PT); *N. antiopa*, Torreya St. Pk., Liberty Co., 6 May (ILF); *Siproeta stelenes*, Cooper City, Broward Co., abundant 5 Sept.

(ILF), Homestead, Dade Co., abundant, 20 Nov. (PT), Plantation Key, Monroe Co., 10 March (PT); *Anaea andria*, common, Williston, Levy Co., 25 March & 15 Oct. (JS). SATYRIDAE: *Lethe appalachia*, Crystal Springs, Polk Co., 16 Apr. (DLB) & Jacksonville, Duval Co., 1 Oct. (CZ); *E. areolata*, Big Cypress National Preserve, Collier Co., 21 March (DMW); *Cylopsis g. gemma*, Crystal Springs, Polk Co., 16 Apr. (DLB) & Gainesville, Alachua Co., 18 June (JS); *Megisto cymela viola*, Shell Bluff Landing, Crescent Lake, Flagler Co., 2 Apr. (HDB). (Note recent genera changes.) PIERIDAE: *Eurema dina helios* remained locally common in Dade Co. throughout the season; PT reported the following from Plantation Key, Monroe Co.; *E. nise*, 3 Nov., K. castalia, 9 July; *P. statira floridensis*, Hugh Taylor Birch St. Pk., Broward Co., 5 Sept. (HDB); *P. philea*, John Stretch County Park, Palm Beach Co., 26 Dec. (DLB). RIODINIDAE: DMW reported *L. virginianensis* common, nectaring on beds of *Vigna luteola*, Corkscrew Audubon Sanctuary, Collier Co., 23 March. LYCAENIDAE: *C. hessei*, Apalachicola Ntl. Forest, Liberty County, March-Apr. (SR) (SOUTH); *C. niphon*, Eastport, Duval County, 18 March (HDB); *C. henrici margaretae*, locally common, Duval, Putnam, Volusia & Hernando Cos., March (SR, JS, HDB, DLB, CZ); *C. l. liparops*, Withlacoochee St. Forest, Hernando County (SOUTH), 29 Apr. (SR); Jacksonville, Duval County, 13 May (HDB); *S. acis bartrami*, Big Pine Key, Monroe Co., 3-5 Apr. (FDF); *E. angelia*, Lauderdale, Broward Co., locally common, 8 June (ILF); *C. s. simaethis*, locally common, Key Largo, Monroe Co., May & Dec. (HDB, ILF). HESPERIIDAE: *E. dukesi*, Jacksonville, Duval County, locally common, 25 Sept.-8 Oct. (HDB); Gainesville, Alachua Co., 21 Sept. (JS); *E. berryi*, Collier, Flagler & Liberty Cos., May & Sept. (HDB, ILF, JS); *Pholisora catullus* (confirmational STATE), Gainesville, Alachua County (SOUTH), Sept. (JS); *P. viator*, Gainesville, Alachua Co., 3 May (JS) & 29 Oct. (CZ); *P. aaroni howardi*, Gainesville, Alachua Co., 20 Sept.-7 Oct., common (JS) (LATE), 19 Nov. (ILF). *Megathymus yuccae buchholzi*, tents common in *Yucca aloifolia* along Hwy. A1A in Nassau, Duval & St. Johns Cos., Feb.-March (CZ). *Hesperia meseki*, Big Pine Key, Monroe Co., 3-5 Apr. (FDF), Ft. Caroline, Duval Co., Oct. (JW), Williston, Levy Co., June (JS), Melrose, Putnam Co., 20-21 Oct. (JS). Comments: A number of good reports were received this season for Florida, but due to the extensive material involved, it was necessary to cull the reports for the information of most interest and significance; thanks to all involved with the Florida report. *D. eresmius tethys*, *S. stelenes*, & *Urbanus d. dorantes* apparently all reached record population peaks in 1978; look for these species to extend their known range. Being an area of high interest, those wishing additional information about particulars may contact the ZONE VI Coordinator.

GEORGIA: Conditions: Ga. experienced a late spring, with a dry early summer period and wet late summer season; the fall period lasted well into December.
MOTHS: SATURNIIDAE: *C. angulifera*, Suches, Union Co., 3 July (HDB); *A. luna* & *A. polyphemus*, Glynn Naval Air Station, Glynn Co., 7-8 Apr. (DLB). CITHERONIIDAE: *E. imperialis*, State Fish Hatchery, Rabun Co., 10-16 Aug. (DLB); *C. sepulchralis*, Dahlonega, Lumpkin Co., 2 July. SPHINGIDAE: *C. juglandis*, P. myops, L. halicarniae, Glynn Naval Air Sta., Glynn Co., 7-8 Apr. (DLB). NOCTUIDAE: the following were recorded from Cooper's Creek St. Rec. Area, Fannin Co., 1-3 July (HDB); *C. crataegi*, *C. habilis*, *C. andromedae*, *C. ilia*, & *C. micronympha*; *Hypsoropha monilis*, Glynn Naval Air Sta., Glynn Co., 7-8 Apr. (DLB); *Amphipyra pyramidoides*, State Fish Hatchery, Rabun Co., 10-16 Aug. (DLB). ARCTIIDAE: *Haploa militaris*, abundant, Cooper's Creek St. Rec. Area, Fannin Co., 1-3 July (HDB). BUTTERFLIES: 63 spp. reported in 1978. NYMPHALIDAE: *S. diana*, St. Fish Hatchery, Rabun Co., 10-16 Aug. (DLB), Cooper's Creek St. Rec. Area, Fannin Co., ♂♂s fresh and common, 3 July (HDB), ♀♀s common by 20 Aug. (ILF); *S. cybele*, St. Fish Hatchery, Rabun Co., 10-16 Aug. (DLB); *P. faunus smythi*, common, Cooper's Creek St. Rec. Area, 1-3 July (HDB, JS); *C. nycteis*, Oconee Nat. Forest, Jasper Co., 12 May (JS), & Ft. Mountain St. Park, Murray Co., 16 July (CW); *C. gorgone*, Allatoona Dam Rec. Area, Bartow Co., 11 May (JS). PIPERIDAE: *P. virginianensis*, Cooper's Creek St. Rec. Area, Fannin Co., 29 Apr. (ILF). SATYRIDAE: *L. creola*, *C. g. gemma*, Oconee Nat. Forest, Jasper Co., 12 May (JS); *C. pegala alope f. carolina*, L. eurydice appalachia, St. Fish Hatchery, Rabun Co., 10-16 Aug. (DLB). LYCAENIDAE: *C. h. henrici*, common, Hartley Bridge Rd., Crawford Co., 1 Apr. (ILF); *C. h. margaretae*, Jekyll Island, Glynn Co., 2 Apr. (FDF); *C. gryneus sweadneri* (confirmational STATE), Jekyll Island, Glynn Co., 2 Apr. (FDF); *C. niphon*, Allatoona Dam, Bartow Co., 11 May (JS); *S. l. strigosa*, Cooper's Creek St. Rec. Area, Fannin Co., 2 July (HDB); *C. irus*, Cooper's St. Rec. Area, Fannin County, 29 Apr. (AT), and at I-20 & Siloam Rd., Green County, 23 Apr. (ILF); *E. o. ontario*, Beaumont Rd., Kennesaw, Cobb Co., 1 June (ILF); *C. augustinus croesioideus*, Allatoona Dam, Bartow County, 4 Apr. (ILF). HESPERIIDAE: *Euphyes arpa*, Union Carbide Plant, Woodbine, Camden County, 28-29 Sept. (LAH); *P. hobomok*, Oconee Nat. Forest, Jasper County (SOUTH), 12-16 May (JS, ILF); *Urbanus d. dorantes* (STATE), Kingsland, Camden County, 3 Dec. (CZ); *A. celia belli* & *A. vialis*, Oconee Nat. Forest, Jasper Co., 12 May (JS); *P. coras*, St. Fish Hatchery, Rabun County, 10-16 Aug. (DLB); *Nastra l'herminieri*, same as preceding.

SOUTH CAROLINA: BUTTERFLIES: *Problema bulenta*, Poanes viator, *A. numitor*, *Asterocampa alicia*, Savannah River Wildlife Refuge Area, Jasper Co., 12 Aug. (JS, JW, HDB); *Problema byssus*, *P. viator*, *P. coenia* & *P. aaroni howardi*, US 17 mi. E. of Ashpoo River, Colleton Co., 12 Aug.

NORTH CAROLINA: CW & LK reported for Brunswick, Allegheny, and Surrey Cos.
MIGRATORY SPECIES: *V. cardui*, Allegheny Co., 16 Aug. (LK); *P. coenia*, Brunswick Co., 5-12 Aug. (CW). BUTTERFLIES: PAPILIONIDAE: LK reported *G. marcellus* & *P. cresphontes* along US 52 just N. of Mt. Airy, Surrey Co., 17 July. NYMPHALIDAE: CW listed *L. archippus*, *L. arthemis* & *E. claudia* from Brunswick Co., Aug.; *P. faunus*, Allegheny Co., 16 Aug. (LK); *S. diana*, US 52 just N. of Mt. Airy, Surrey Co., 17 July. PIERIDAE: *A. midea*, along Hwy. 601 W. of US 52, Surrey Co., 15 Apr. (LK); *E. nicippe* & *E. lisa* were locally common in both Brunswick (Aug.) & Surrey Cos. (17 July). SATYRIDAE: *C. pegala*, 2 ♂♂s, Brunswick Co., Aug. (CW). LYCAENIDAE: a single *P. m-album* & *F. tarquinius*, Allegheny Co., 16 Aug. (LK). HESPERIIDAE: CW reported the following from Brunswick Co., 5-12 Aug.: *A. delaware*, *A. campestris*, *P. vibex*, *E. zarucco*, *T. abthyllus*, *N. l'herminieri* & *H. phyleus*; *L. accius*, Surrey Co., 16 Sept. (LK); *A. vialis*, Hwy. 601 W. of US 52, Surrey Co., 15 Apr. (LK); *E. dion dion*, Jct. Hwy. 601 & US 52, Surrey Co., 26 July (LK); *E. conspicua* & *E. bimacula*, Hwy. 601 1/2 mi. W. of US 52, Surrey Co., 26 July (LK).

VIRGINIA: Conditions: LK reported an early spring (but a late cold snap which dumped several inches of snow on 26 Apr.; the following day he found *C. gryneus*, *C. irus*, *C. augustinus*, & several *Erynnis* spp. "treetopping" with snow on the ground), a typical summer, with the fall period lasting into Nov.

MIGRATORY SPECIES: LK reported his first *V. cardui* at Spruce Run, New River, Montgomery Co., 12 Aug.; he took his second in Poverty Hollow, Mont. Co., the same day; Chinoctague, Accomac Co., 20 Aug. (PM).

MOTHS: PM reported 93 species from Manassas, Fairfax Co. & vicinity: SATURNIIDAE: *A. polyphemus*, 10 May; *A. luna*, May; *A. io*, July. CITHERONIIDAE: *E. imperialis*, Nokesville, 25 July; *A. virginianensis*, 26 July. SPHINGIDAE: *C. undulosa*, June; *C. catalpae*, 3 Aug.; *L. coniferarum*, July; *H. diffinis* & *H. thysbe*, May-Aug. ARCTIIDAE: *D. virginica*, 5 Aug.; *H. cinctipes*, July-Aug. NOCTUIDAE: *C. epione*, 15 July; *C. amatrux*, 29 Aug.; *C. ultronia*, July-Aug.; *C. subnata*, 1 Aug.; *E. nubilis*, 10 July; *Schinia marginata*, July, Aug.; *Heliothia unipuncta*, 10 Aug.; *Apatela hasta*, 14 Aug.; *Spragueia onagrus*, July.

BUTTERFLIES: Reports were received for 98 species; LK reported he had records for 119 spp. during 1978, indicative of a good season. PAPILIONIDAE: *P. cresphontes*, Pov. Hollow, Montgomery Co., 2 June & Rye Valley, Giles Co., common, 24 July (LK); *P. palamedes*, Chinoctague, Accomac Co., 20 Aug. (PM); *G. marcellus*, Wise Co., 24 Apr. (LK); Vermillion Farm, Scott Co., 14 Apr., common (CW). NYMPHALIDAE: *A. clyton*, 28 June, Vermillion Farm (CW) & Green Valley, Giles Co., 12 Aug. (LK); *B. bellona*, Manassas Battlefield Park, 29 Apr. (PM); 14 Apr., Scott Co. (CW), & Pov. Hollow, 5 July (LK); *P. coenia*, Chinoctague, 20 Aug.; *P. progne*, Dublin, Pulaski Co., 20 Oct. (LK); *P. faunus*, Peters Mt., Giles Co., 27 Aug. (LK); *S. idalia*, Pov. Hollow, Mont. Co., 2 June (LK) & 1 July (CW); Green Valley, Giles Co., 5 July (LK); *S. diana*, Bland Co., 11 July; Pov. Hollow, 30 May (early ♀), 1 July (♂♂s common), 12 Aug. (several ♀♀s); Green Valley, Giles Co., 27 Sept. (late ♀); Norton, Wise Co., 10 July; Appalachia, Wise Co., 6 July. SATYRIDAE: *C. pegala f. maritima*, Wakefield Park, Fairfax Co., 15 July (RHS); *L. p. anthedon*, Green Valley, Giles Co., 12 Aug. (LK), Manassas Battlefield Park, Pr. William Co., 15 June (PM), Vermillion Farm, Scott Co., 25 May (CW). PIERIDAE: *C. cesonia*, Poverty Hollow, Mont. Co., 23 Aug. (LK); *A. midea*, Wise Co., 24 Apr.; Pov. Hollow, Mont. Co., 20 Apr.; Manassas Batt. Pk., 29 Apr. (PM); Vermillion Farm, Scott Co., 14 Apr. (CW); *P. virginianensis*, Wise Co., 24 Apr. (LK), and Verm. Farm, Scott Co., 14 Apr. (CW). RIODINIDAE: *C. borealis*, Poverty Hollow, Mont. Co., 5 July (LK). LYCAENIDAE: *C. ebenina*, Pov. Hollow, Mont. Co.,

13 Apr. (FDF); 25 Apr. (LK); Wise Co., 24 Apr. (LK); G. lygdamus, Carroll Co., 20 Apr.; Pulaski Co., 20 Apr.; Pov. Hollow, Montgomery Co., common 19-25 Apr. (LK); C. augustinus croesioides, Prince William Forest Park & Dumfries, Pr. William County, 30 Apr. (PM, RHS); Pulaski Co., 14 Apr.; Wise Co., 24 Apr.; Poverty Hollow, 16-20 Apr. (LK); C. niphon clarki, 3700', Wise Co., 24 Apr.; Pov. Hollow, abundant, 2 June (LK); C. h. henrici, Prince William Forest Park & Dumfries, Pr. William County, 30 Apr. (PM, RHS); Scott Co., 14 Apr., common (CW); Pov. Hollow, common, 16-20 Apr. (LK); C. irus, Pulaski Co., 1 Apr.; Carroll Co., 20 Apr.; Wise Co., 24 Apr.; Pulaski Co., 14 Apr.; Pov. Hollow, 16-25 Apr. (LK); Lycaena thoe (=hyllus), Poverty Hollow, Montgomery County, 5 July (LK); S. kingi, Pov. Hollow, Mont. County, 5 July (LK); S. l. strigosum, Green Valley, Giles Co., common, 5 July (LK); Manassas Batt. Pk., 24 June (PM); Reston, Fairfax Co., 24 June (RHS); P. m-album, Pov. Hollow, 16 Apr. & 5 July; Norton, Wise Co., 10 July; Giles Co., 9 Apr.; Pulaski Co., 14 Apr.; F. tarquinius, Wakefield Pk., Fairfax Co., 23 Apr. (RHS); Georges Mill, Loudoun Co., 29 Apr. (RHS); Spruce Run, New River, Montgomery Co., 12 Aug. (LK); Giles Co., 12 Aug. (LK); C. cecrops, Manassas Batt. Pk., 14 June (PM); Chinoctee, Accomac Co., 21 Aug. (PM); Erora laeta, Craig Co., 13 July; Norton, Wise County, 10 July; Big Walker Mt., Bland Co., 11 July; Little Creek, Pulaski County, 12 July; Mountain Lake & Gap Mountain, Montgomery Co., 12 July; Peters Mountain, Giles Co., common, 11 July, late record 27 Aug., same locality (all records LK). HESPERIIDAE: H. metea, Pov. Hollow, Mont. Co., 25 Apr. (LK); Dumfries, Prince William Co., 30 Apr. & 20 May (RHS); Poanes yehl, Green Valley, Giles Co., 23 Aug. (LK); A. aesculapius, Pov. Hollow, Mont. Co., 29 June (LK); A. hianna, Green Valley, Giles Co., 5 June (LK); Dumfries, Prince Will. Co., 20 May (RHS); A. cellus, Poverty Hollow, Mont. Co., 2 June (LK); Green Valley, Giles Co., 5 June, 24 July (LK); H. sassacus, Pov. Hollow, Mont. Co., 2 June (LK); E. bimacula, Green Valley, Giles Co., 12 Aug. (LK); E. conspicua, Dublin, Pulaski Co., 24 July (LK); P. centaureae wyandot, Pulaski Co., 19 Apr. & 15 Apr., Carroll Co. (LK); P. coras, Manassas Batt. Pk., June (PM), along I-77, Carroll Co., 18 June (CW); RHS reported that E. d. dion was not seen at the Aqua Po Beach locality despite his several trips to check again this season for it; S. hayhurstii, Dumfries, Pr. William Co., 20 May (RHS). Comments: Again, several good reports were received from this state; the numbers of entries necessitated some shortening of the report; the Coordinator thanks all the contributors for their efforts. Of particular interest are the B. bellona records, a species currently known to be expanding its range; RHS provided additional records for early dates in NE. Virginia, noting the records were largely for melanic specimens; also note the surprising number of reports for E. laeta.

ZONE 7: NORTHEAST: QUEBEC (to 50th parallel). MARITIMES, NEW ENGLAND, NEW YORK, NEW JERSEY, PENNSYLVANIA, DELAWARE & MARYLAND. Coordinator: Dave Winter (DW). Contributors: Auburn E. Brower (AEB), Charles Burkhardt (CB), Robert C. Busby (RCB), Richard W. Boscoe (RWB), William Boscoe (WB), Gilles Deslisle (GD), George Ehle (GE), Frank D. Fee (FF), John H. Fales (JF), Tom Franks (TF), Richard E. Gray (RG), Edward Jennejohn (EJ), Philip J. Kean (PK), Warren Kiel (WK), Ross Layberry (RL), Gerald M. McWilliams (GMW), Glen S. Morrell (GSM), Molly Monica (MM), Robert May (RM), Edward A. Prescott (EP), John Prescott (JP), A.W. Thomas (AT), Theodore N. Taft (TT), Ben Williams (BW), David M. Wright (DMW), Thomas S. Williams (TW). (Copy of any contributor's full report available from coordinator on request.)

QUEBEC: (All RL, Gatineau Co., unless noted.) O. chryxus very abundant nr. firetower above Luskville Falls, 26 May; O. jutta acerta, St. Alban, Co. Portneuf (GD). P. comma larvae common early Aug. on Laportea canadensis (woodnettle), but no adults seen all season. B. eunomia in floating bog nr. St. Francis de Marham, 17 June. C. nycteis abundant (prev. rare) at Luskville Falls firetower sites 28 June-15 July, larvae on Aster, 26 Aug. C. eryphon in large colony 1 mi. S. of Forbes Depot, Laverendrye Pk., 24 May in assoc/w Pinus strobus & resinosa: 110 mi. SE. of nearest known colony, Algonquin Pk., Ontario: PROV. RECORD. S. caryaevorus & boreale scarce 2 July at site of prev. huge colony. E. laeta, 2 ♀♀ at 5 P.M., 29 May, in shade at road edge on very hot day, assoc/w Fagus. Colias interior by blueberries at firetower site 28 June-15 July, including albinic ♀ & (ZONE AWARD!) gynandromorph left yellow ♂ and right white ♀. E. olympia numerous at firetower site, 26 May; prev. absence indicates eastern range extension. P. napi oleracea flew in Gatineau Co., 24 May-14 Aug., in Co. Portneuf, 14 May-17 June, 20 July (GD), and in Parc de la Gaspésie, 5 July (GD); E. lisa taken 13 July, St. Raymond, Co. Portneuf. H. columbia was taken 15 & 17 June in St. Marc-de-Carrières & Chute-Panet, Co. Portneuf (GD).

NEW BRUNSWICK: C. nipisiquit was taken nr. Bathurst, Gloucester Co., 5-7 Aug. (RCB), & P. faunus, progne, gracilis & satyrus were taken together S. of there, along with B. titania grandis & bellona. L. dorcas dispassosii flew with nipisiquit. One ♂ Euphyes bimacula (PROV. RECORD) was taken in a malaise trap, 4 July in Bull Pasture Bog, 15 mi. NE. of Frederickton, Sunbury Co. (AT).

MAINE: AEB reported on almost daily observations throughout the SW quarter of the state, noting only 29 species, none unusual. An early record was P. hobomok, 30 Apr., Augusta, Kennebec Co.; only L. eurydice was numerous, Appleton, Knox Co., 12 July. Many fresh B. eunomia dawsoni ♂♂ flew 17 June at Wilsons Mills bog, Oxford Co. (WK); C. eryphon was present there in small numbers again 29 May. GSM saw numerous N. milberti perching on gondola lift towers Sept. at Sugarloaf Mt., Franklin Co. L. portlandia, C. interior, & L. epixanthe were common in Acadia Pk. early July, and one worn C. nycteis was seen 8 July at Bangor, Penobscot Co. (DMW). A. luna was numerous at light 28 May in Islesboro, Waldo Co., with many Catocala there at light and bait late Aug., including many briseis and a few coelebs (DW).

NEW HAMPSHIRE: Season was drier than average and lacked early spring warm spells, mid-summer collecting, esp. at flowers, poor. WK found C. inornata common 16 June in Whitefield, Coos Co., and less common in second brood late Aug. & early Sept. (Kiel had confirmed presence of second brood, as opposed to sibling species, by rearing in 1975.) DMW observed S. atlantis feeding at mouse dung 5 July nr. Mt. Washington, Coos Co., RG found P. napi oleracea very common in N. NH early June. T. lineola was present for the first time, in large numbers, early July, in Hanover-Enfield area, Grafton Co. a northern range extension for NH (RG), although the species was also present 40 mi. to NW. at Barre, Vt., July 1977 (DW). Deidamia inscriptum at light 27 May & H. gracilis at flowers 11 June at Whitefield (WK); H. lucina reared ex larva on Spiraea alba, Wentworth, Grafton Co. (DW); many Ufeus satyricus at Enfield, Oct. (RG); unusual numbers of B. infans in Apr. in Bethlehem, Grafton Co. (WK) & Plymouth, Grafton Co. (DW).

VERMONT: L. arthemis-astyanax were common early June in Windham Co. (GSM), with intergrades particularly increased. P. napi oleracea common in N. VT early June (RG). Numerous E. bimacula taken 4 July (77) at Wolcott, Lamoille Co. (DW). See also NH.

MASSACHUSETTS: C. inornata (STATE RECORD) has continued its southward extension, taken by RCB 10 June in Groveland, Essex Co. He also notes new locale for C. henrici, worn ♀♀ late May in Reading, Middlesex Co., and continued to find S. caryaevorus early July in Groveland. GSM found L. arthemis-astyanax intergrades numerous early June in NW. Franklin Co. Paratrea plebejus taken 28 July, Chilmark, Dukes Co. (DW: last ascertained record for Mass. by Scudder in 19th cent.); E. pandorus & S. chersis taken there same date, & E. pandorus & H. lineata early Aug. in Dedham, Norfolk Co. (DW). H. maia reared on oak ex-wandering larva, Clilmark (DW). TF took many Phrag. assimilians mid-June in Hopkinton, Middlesex Co., and H. hircina 1 Apr.; C. parta in Dedham, 8 Aug. (DW); C. badia, 3 Aug.; Gluphisia avimacula, 5 May, melanic L. unitaria ♂ 29 June, & C. divisata, 24 July: Hopkinton (TF).

CONNECTICUT: (BM, Pomfret, Windham Co., except as noted.) Fresh E. ello at UV light, 5 Aug.; S. eremitus at flowers, 16 June (early); C. angulifera ♂, 15 July; Expantheria scribonia, 7 July; U. bella, at UV 9 July. GSM took an extensive list of usual Catocala at bait in W. Hartford, and also C. amatrix, residua, & relicta; latter also taken several times at UV late July, Pomfret (BW).

NEW YORK: C. nycteis numerous at Cornwall-on-Hudson, Orange Co., 2 July, as were C. pegala nephele, where alope is the usual form (CB). C. napi oleracea common in Allegany St. Pk., 20 May (TT). P. zabulon & T. lineola, 20 June on Staten Island, and fresh P. massasoit at Rhinebeck, Dutchess Co., 19 July (CB). TT reported Sphingidae less common, with M. sexta apparently M. quinquemaculata at Fredonia, Cattaraugus Co. EJ found M. quinquemaculata 3 Oct. in Minoa, Onondaga Co.,

and *D. versicolor*, 1 July, *H. galii*, 27 July. TT's extensive list of *Catocala* included *residua*, *subnata*, *unijuga* f. *agatha*, *parta* f. *perplexa* & *forbesi*, *meskei*, & *amatix*. EJ at MV light in Minoa took *H. trisignata*, 1 June, 29 July; *E. thanatologia*, 9 July; *C. lunula*, 1 June, 13 Aug.; *M. jucunda*, 15 July; *C. acadensis*, 9 July, edge of range; *B. algens*, 24-30 July; *Apamea inordinata*, 8 June; *O. exhausta*, 14 July; *Eremobina leucoscelis*, 7 Aug.; *H. micacea*, 24 Aug.; *P. baptisiae* & *furcata*, 5 Sept.; *Schinia obscurata*, 27 June; *S. epigea*, 10 Aug., west of range; *P. balluca*, late July; *A. ampla*, 18 June-10 July, edge of range; *E. thyatroides*, 23 July '77; *Remigia texana*, 22 Aug.; *C. spadix*, 30 May; *A. erosa*, 1 Oct. '77; *L. explanata*, 31 July; *H. divisaria*, 2 July; *Semiothisa fissinotata*, 28 May; *sexmaculata*, 1 June, *pinistrobata*, 18 June, *bicolorata*, 2 July; *I. exauspicata*, 14 July; *A. aurea*, 22 Oct., late.

NEW JERSEY: *Speyeria atlantis* ♀ (det'n by dosPassos) taken by MM on *A. tuberosa* at Chester, Morris Co., 30 July (STATE RECORD). She also noted a marked decline in numbers of *S. idalia* in recent years. RWB took *C. henrici*, 29 Apr. nr. Seaville, Cape May Co., in assoc/w *Vaccinium corymbosum*, on which confined ♀♀ oviposited; larvae, reared to pupae, ate flowers only (see also PA.). CB found many *A. midea*, 29 Apr. at Lakehurst, Ocean Co. *Paratreia plebeja* taken at W. Caldwell, Essex Co., 15 July (RM). TW noted a plague of *A. senatoria* larvae on *Q. ilicifolia* & *marilandica* in Burlington Co. "West Plains" barrens, 7 Sept. (see also MD). Numerous *Catocala* were recorded in W. Caldwell by RM, including *parta* & *amatix*.

PENNSYLVANIA, SE. & Central: GE found a few fresh *L. anthedon* in Lancaster, 5 July after 25-year absence, and *C. niphon*, 11 May after 23 yrs.; 2 *F. tarquinius* taken 13 July amidst an apparently increasing woolly aphid population. He found only 3 *P. m-album*, 2 ♂♂ mid-May, fresh ♀ 13 July; FF took one 29 Apr. in Gifford Pinchot St. Pk., York Co.; also took *G. lygdamus* 31 May, Scotia Barrens, Centre Co.; and in Stone Valley Rec. Area, S. acadica & *caryaevorus* (COUNTY RECORDS). At Gifford Pinchot St. Pk. RWB found *C. henrici* in assoc/w *Cercis canadensis* and reared larvae to pupae on flowers and foliage of that plant (see also NJ). FF also took many *S. melinus* larvae, 22 Sept. at Scotia Barrens on pods of *Lespedeza capitata* & *hirta*, most parasitized by Braconidae. DMW noted a natural white oak sap flow fermented by *Torulopsis* sp. at Merion, Montgomery Co., at which were feeding *A. nessus*, 11 June, and numerous *P. interrogationis*. *N. antiopa*, *V. atalanta*, *A. clyton*, & *E. cymela*, 18 June. Large numbers of *P. interrogationis* were noted throughout season in Lancaster (GE); 50 *A. clyton* ♂♂ seen in Benner Twp., Centre Co., 5 July, and larval nest of *C. nycteis* on *Rudbeckia laciniata*, 13 Aug. (FF). *B. toddi* seen at asters, 9 Oct., Valley Forge, Montgomery Co. (TW). WB, reporting blacklight collecting at Spinnerstown, Bucks Co., noted late spring with overlap of spring and summer species; *E. pandorus*, June & Aug.; *S. kalmiae*, *C. amyntor*, *C. jasminearum*, July; *S. eremitus*, July & Aug.; *A. cingulatus*, Oct.; *A. io* & *C. angulifera*, July; *A. arge*, July; *C. connubialis*, July; *C. serina*, *flebilis*, *obscura*, *subnata*, *parta* (common), Aug.; *C. obscura* & *residua*, Sept.; *C. amatix*, Aug. & Oct. (detailed records on over 200 additional species are available from contributor). Northwest: Area had early summer drought. *L. portlandia* very common in July, Wetmore, McKean Co. (EP, JP), *P. coenia*, 28 June in Union City, Erie Co. (GMM) & 2 Sept., Harbourcreek Twp., Erie Co. (EP); *L. arthemis* & *astyanax* very common, esp. Aug. brood, Wetmore (EP, JP); *astyanax* scarce and seen only early Aug. in Millcreek Twp., Erie Co. (JP). *N. milberti* very common late July thru Aug., Erie & McKean Cos. (EP, JP). *C. harrisii* abundant June & moreso late Aug., McKean Co. (EP, JP). *B. toddi* common late June & early July, McKean, Crawford, Erie Cos. (EP, JP). *P. prognis* common late Aug., McKean Co. (JP). Hairstreaks were generally scarce except for many *S. liparops*, Union Twp., 22 July (JP). *L. phlaeas americana* was extremely common in 3 broods May, July, & Sept. (EP, JP). *L. thoe* common Sept., Erie Co., after 22-year low; *L. epixanthe* common Wattsburgh, Erie Co., 24 June (GMM). *P. virginensis*, Union City, 9 May-8 June (GMM), Millbrook Twp., 11 May (JP), and 19 May (EP), COUNTY RECORDS. *B. philenor*, 16 July, Waterford Twp. (EP), & 25 July, Titusville, Crawford Co. (GMM), ♀♀ July & Aug., Venango, Crawford Co. (JP). *P. glaucus*, dark ♀♀ Wetmore, late June (JP) & McKean Co., early July (EP). *T. lineola*, Erie Co., mid-July into Aug.: late (JP); *P. hobomok* abundant, Erie Co., early June (JP), and very dark ♂ (GMM); *A. vialis* very common nectaring on *Labiatae*, McKean Co. July (JP).

MARYLAND: Area had cool spring, hot humid summer, and long mild fall. (All observations JF, Calvert Co., unless noted.) *D. plexippus* appeared 13 & 30 Apr. but was scarce thruout summer (as in all northeast) with very weak fall migration mid-Oct. *Satyridae* were scarce in Calvert Co.; PK found *L. anthedon* numerous in Washington Co. & *C. pegala alope* very abundant in Alleghany Co. late Aug. *C. cardui* was present in low numbers in eastern areas May-Oct. (absent last year); *E. claudia* was down; taken in Cecil Co. 19 Aug. (PK). *P. comma* & *interrogationis* were especially common late season both in eastern counties and in west; *L. astyanax* seen as late as 12 Oct. in Charles Co. (all PK). He also found many *C. henrici* mid-Apr. in Anne Arundel Co., *G. lygdamus nittanyensis* late in Alleghany Co. 7 May. JF found *E. lisa* & *P. protodice* scarce, with *P. sennae* & *E. nicippe* not recorded. PK took *P. virginensis* on Appalachian Trail eastern border of Washington Co. late April, found *A. midea* less frequent in Anne Arundel Co. & western Cos., and took *E. olympia* above the Potomac near Hancock. JF recorded *P. glaucus* in Nov. for first time, and found *Papilionidae* generally normal. JF did not record *P. aaroni*, *L. accius*, or *H. leonardus* this year; *P. panoquin*, *P. ocola*, *N. therminier*, & *P. communis* were scarce. *P. centaureae wyandot* was taken 7 May, late, Alleghany Co. (PK). JF took *H. phyleus* from late July into Nov., with an early record 28 June, and found *A. dion* & *A. delaware* in Worcester Co. mid-July. *A. lyciades* was numerous again. PK noted a glut of *E. clarus* in Cecil Co. mid-Aug.; he saw a few *P. aaroni* & *P. panoquin* at North Beach, Calvert Co., 5 Sept.; and he and other found *H. leonardus* numerous in Prince George's Baltimore, & Charles Cos., Sept. & early Oct. Moths of note (all PK) included many *C. regalis* & *E. imperialis* nr. *flintstone*, Alleghany Co., 9 July, along with the commoner *Saturniidae* & *A. senatoria*; larvae of latter were seen defoliating many trees in Washington & Alleghany Cos. in late Aug. 15 July he took *Ecpantheria scribonia* & *C. angulifera* at light in Baltimore Co., and on both occasions noted severe competition from predatory bats. These animals seem to (un)-bug Maryland collectors regularly.

URBAN COLLECTING: New York City: *P. verna*, 13 July, *A. nessus*, 12 July, Riverside Pk.; *A. octomaculata* on 10th & 12th Sts., 15 June, late (CB). Philadelphia: *N. antiopa*, March, *A. hianna*, 11 June, *H. metea*, late May, *A. delaware*, 12 Aug., *E. icelus*, 21 May, *A. lyciades*, 11 June; *H. cecropia* larvae, *C. illia*, *ultronia*, *cara*, & *crategi*, *Zale lunata* & *horrida*, *E. nubilis*, all in Fairmount Pk. (TW). Washington, D.C.: *C. cecrops* & *S. edwardsi*; *S. hayhurstii*, *E. zarocco*, & *T. lineola*; all new DISTRICT RECORDS in Rock Creek Park (JF).

ZONE 8: THE FAR NORTH: ALASKA, NORTHERN CANADA, GREENLAND, NORTHEAST SIBERIA. Coordinator: Kenelm W. Philip. Contributors: R. Saltmarch, K. Philip and collectors for the Alaska Lepidoptera Survey. Previously unreported localities or species are emphasized; collecting is by ALS volunteers unless noted. Note regarding Alaska Lepidoptera Survey: In response to an invitation from the Institute of Biological Problems of the North, Magadan and under the auspices of the National Academy of Sciences/Soviet Academy of Sciences exchange program, K. Philip was able to visit the Magadanskaya Oblast' (extreme NE Siberia) and spend eight weeks collecting at scientific field stations in arctic and subarctic biotopes. June and early July were spent in taiga and alpine tundra at the 'Aborigen' station 250 km N. of Magadan in the upper Kolyma valley. The remainder of July was spent in arctic tundra at the 'Chaun' station on the arctic coast of Chukotka. Additional material was obtained from Dr. G. Egorova, who collected in the Detrin River valley S. of the Aborigen station; and from Dr. E. Makarchenko who spent the late summer on Wrangel Island.

The summer was consistently cool and rainy, and at Aborigen the spring was exceedingly late after a record snowfall and the alpine tundra butterflies did not emerge during the collecting period. A total of two weeks of effective collecting was possible during eight weeks in the field, and about 1800 specimens were obtained (see below for species and map showing collecting sites). About 350 additional specimens were being held for the ALS from previous summers' collecting by Dr. E. Matis, who has been actively cooperating with the ALS since 1972.

About 25 ALS volunteers were in the field this summer, ranging from Greenland to NE Siberia. Input to date is 3900 specimens.

GREENLAND: Qanaq, 22-24 July: *Colias hecla*, *Boloria polaris*, *B. chariclea*. Thule, 25 June-27 July: *Colias hecla*, *Agriades aquilo*, *Boloria chariclea*, *Gynaephora groenlandica*, *Entephria polata*, *Udea torvalis*, *Argyroploce inquietana*. Range extension: *Boloria polaris*, in Wolff's paper on the Lepidoptera of Greenland, is recorded only from north and east Greenland. This is the second summer (see 1976 Annual Summary) *B. polaris* has been found at Qanaq, on the west coast.

NORTHWEST TERRITORIES: Tuktoyaktuk, 4 Aug.: *Colias hecla*, *C. philodice*, *C. palaeno*, *Boloria napaea*, *Coenonympha kodiak*.
Caribou Hills nr. Reindeer Depot, 10 Aug.: *Colias philodice*, *C. nastes*, *Lycaeides argyrognomon*.

ALASKA: Weather: Interior Alaska again had an extremely rainy June, followed by improved conditions in July. Range extensions: *Polygonia gracilis* from Nuvagak Point, Beaufort Lagoon (Arctic Coast). *Everes amyntula* from Innachuk River (northern Seward Peninsula) and the Kivalina River (SW of Wulik Peaks, DeLong Mountains). Notable captures: *Polygonia satyrus* from the Haines Hwy. nr. the Kivalina-B.C. border--the first specimen of this species from Alaska.

North Slope: Sadlerochit River, 9-10 mi. from coast, 6-29 July: *Parnassius evermanni*, *Papilio machaon*, *Colias hecla*, *C. nastes*, *Boloria polaris*, *Oeneis melissa*, *Erebia rossii*, *E. disa*, *Acerbia alpina*. East side Demarcation Bay, 19 Aug.: *Colias hecla*, *Lycaena phlaeas*. Nuvagak Point, Beaufort Lagoon, 30 Aug.-3 Sept.: *Colias hecla*, *Polygonia gracilis*. Brooks Range: Kivalina River, SW of Wulik Peaks, DeLong Mountains (68° 00'-10' N., 163° 55'-164° 15' W), 13 June-6 July: *Parnassius evermanni*, *Papilio machaon*, *Pieris napi*, *Colias philodice*, *Euchloe creusa*, *Lycaeides argyrognomon*, *Everes amyntula*, *Boloria frigga*, *B. improba*, *B. polaris*, *B. freija*, *B. chariclea*, *Coenonympha kodiak*, *Oeneis bore*, *Erebia rossii*, *E. disa*, *E. theano*. Wulik River, DeLong Mountains (68° 05'-10' N, 162° 55'-163° 30' W), 3-5 July: *Colias hecla*, *C. philodice*, *C. palaeno*, *Lycaeides argyrognomon*, *Boloria distincta*, *B. chariclea*, *Coenonympha kodiak*, *Oeneis bore*, *Erebia theano*.

Seward Peninsula: Innachuk River, 6-15 mi. SW of Deering, 30 May-27 June: *Papilio machaon*, *Pieris napi*, *Colias philodice*, *Everes amyntula*, *Boloria polaris*, *B. chariclea*, *Nymphalis antiopa*, *Erebia disa*, *E. youngi*.

Pribilof Islands: St. Paul Island, 26 June-12 July: *Pararctia subnebulosa*.

Interior Alaska: Eagle, 10-26 June: Additional species (see 1971 Annual Summary): *Pieris occidentalis*, *Colias philodice*, *Lycaeides argyrognomon*, *Limenitis arthemis*, *Boloria titania*. Kathul Mountain (Yukon River between Circle and Eagle), 17-23 July: Additional species (see 1975 Annual Summary): *Papilio machaon*, *Lycaena dorcas*, *Lycaeides argyrognomon*, *Vacciniina optilete*, *Boloria titania*, *Oeneis bore*. South Fork 40-Mile River (64° 04'-05' N, 141° 46'-54' W), 1-4 Aug.: *Colias philodice*, *C. palaeno*, *Lycaena dorcas*, *Lycaeides argyrognomon*, *Limenitis arthemis*, *Nymphalis antiopa*, *Polygonia faunus*, *Boloria titania*. Sheenjek River, 10-20 mi. N-NE of Double Mountain, 14 June-19 July: *Colias hecla*, *Pieris napi*, *Glaucopsyche lygdamus*, *Boloria polaris*, *B. chariclea*, *Oeneis polixenes*, *Erebia rossii*, *E. dabanensis*?, *Pararctia lapponica*. Southcentral Alaska: Southwest flank of Wrangell Mountains (Cheshnina, Chetastina, Dadina Rivers, 15-20 mi. NE of Copper River, 2600-3900' elevation), 4 June-30 July: Saltmarsh reports: *Hesperia manitoba*, *Papilio machaon*, *Pieris napi*, *Colias philodice*, *C. palaeno*, *Euchloe creusa*, *Lycaeides argyrognomon*, *Plebejus saepiolus*, *Agriades aquilo*, *Everes amyntula*, *Glaucopsyche lygdamus*, *Phyciodes campestris*, *Boloria frigga*, *B. freija*, *B. chariclea/titania*, *Coenonympha kodiak*, *Oeneis bore*. Tugidak Island, off SW end Kodiak Island, 3-22 June: *Pieris napi*.

Southeastern Alaska: Haines Hwy. just inside Alaska border, 21 Apr.: *Polygonia satyrus*, *Nymphalis milberti*. Pelican, 15 June-18. Aug.: *Pieris napi*, *Nymphalis milberti*.

MAGADANSKAYA OBLAST', NORTHEAST SIBERIA: Weather: the south coast and interior had a very heavy snowpack followed by a record late spring and a cool, rainy summer. The arctic coast had an early spring, but again the summer was cool and rainy. On the whole the collecting conditions were miserable. 'Aborigen' field station, upper Kolyma Valley, SE end of range Bolshoy Annachag (see map below), 5 June-6 July: *Pyrgus centaureae*, *Carterocephalus silvicola*, *Parnassius teneidus*, *Papilio machaon*, *Pieris occidentalis*, *P. napi*, *Colias melinos*, *C. nastes*, *C. sp. undet.*, *Euchloe orientalis*, *Leptidia morsei*?, *Callophrys rubi*, *Everes argiades*, *Glaucopsyche lygdamus*, *Aglais urticae*, *Nymphalis antiopa*, *Polygonia c-album*, *Mellicta sp. undet.*, *Boloria freija*, *B. euphrosyne*, *Oeneis jutta*?, *O. sp. undet.* (2), *Erebia rossii*, *E. disa*, *E. discoidalis*, *E. anjuika*, *E. sp. undet.* (3). Most of the collecting at this site was carried out in boggy larch taiga and mixed forest, an environment comparable to the Fairbanks area in Alaska. Only 3 species (*P. occidentalis*, *A. urticae*, & *E. anjuika*) were collected in alpine tundra, owing to the very late season. Detrin River Valley, between Ust' Omchug and the Kolyma River, 6-19 July. *Papilio machaon*, *Pieris napi*, *Colias melinos*, *C. palaeno*, *C. sp. undet.*, *Leptidia morsei*?, *Plebejus argus*?, *Agriades aquilo*, *Araschnia sp. undet.*, *Polygonia c-album*, *Mellicta sp. undet.*, *Boloria freija*, *B. euphrosyne*, *Coenonympha kodiak*, *Oeneis sculda*, *Erebia disa*, *E. kozhantshikovi*, *E. sp. undet.* (2).



'Chaun' field station and vicinity, nr. Ust' Chaun at mouth of Chaun-Pucheveyem River, arctic coast of Chukotka at base of Chaun Gulf, 27 June-28 July. *Pyrgus centaureae*, *Hesperia comma*, *Pieris occidentalis*, *P. napi*, *Colias hecla*, *C. hyperborea*, *C. palaeno*, *C. nastes*?, *Euchloe sp. (creusa?)*, *Lycaena phlaeas*, *Vacciniina optilete*, *Euphydryas iduna*, *Boloria napaea/pales*, *B. frigga*, *B. polaris*?, *B. freija*, *B. chariclea*, *B. eunomia*, *Oeneis bore*?, *O. polixenes*?, *Erebia rossii*, *E. disa*, *E. fasciata*, *E. sp. undet.* The Chaun area is low arctic tundra, similar to northern Alaska. Right at the station conditions are comparable to those at Meade River, Alaska. As one goes south up the river the tundra rapidly becomes much more lush, resembling the northern Brooks Range foothills in both flora and insect fauna. Nyuklya, 25 km east of Magadan on coast of Sea of Okhotsk, 29 July. *Parnassius phoebus*, *Boloria pales*, *Wrangell Island*, 24 July-17 Aug. *Colias nastes*, *Lycaena phlaeas*, *Agriades aquilo*, *Boloria napaea*, *B. polaris*, *B. distincta*?, *B. chariclea*.

On the basis of available information at present, it appears that the following species may represent new records for the Magadanskaya Oblast': *Carterocephalus silvicola*, *Callophrys rubi*, *Araschnia sp.*, *Mellicta sp.*, *Oeneis sculda*. If the *Euchloe* from Chaun should turn out to be *creusa* that would also be a new record. The single specimen of *Erebia anjuika* from Aborigen appears to be the third specimen ever seen of that species, and is a westward range extension. The *Boloria distincta*? from Wrangell Island (whatever species it turns out to be) is a new record, since none of the *distincta/alberta/erda/amphilochus*-group species have been recorded from the island.

ZONE 9: No report.

ZONE 10: SOUTH AMERICA (no coordinator)

BRAZIL: All records Heinz Ebert, unless noted as Eurides Furtado (EF). Localities: C = Chapado dos Guimarães, 75 km, E. of Cuiabá, Mato Grosso, elev. 650-800 m, Paraguay drainage basin; terrain "cerrado", savannah-like open vegetation with patches of forest; best collection at border-zones and on sand beaches along streams; field collecting and bait-traps 21-25 Jan., 14-17 May, 26-27 Aug. (locality prev. cited as "Chapada" by Godman & Salvin and older British authors, or "Buriti" by Talbot, Bull. Hill Mus., 1928). F = Fazenda São João, Mun. Diamantino, between S. bank of upper Rio Arinos (Amazon Basin) and Hwy. Cuiabá-Santarém; terrain similar, much secondary vegetation, elev. 300-400 m, collected 23 Apr.-5 May, 9-21 Aug., 22 Oct.-6 Nov. (last week a rain-out). Notations: C or F for collection site, Roman numeral for month. ACRAEIDAE: None. BRASSOLIDAE: *Brass. s. sophorae*, F-III, XI; *Cal. i. idomeneus*, F-V; *teucer suzanna*, F-V, VIII, X; *t. teucer*, C-I, V; *Catobl. berecynthia adjecta*, F-X; *Dyn. d. darius*, F-III (EF); *Eryph. p. polyxena*, C-V, F-V; *Opopt. aorsa fuscata*, F-V; *Opsiph. invirae amplificatus*, C-I, V, F-IV, V, VIII, X; *c. cassiae*, F-V; *tamarindi incolumis*, C-I; *quiteria quirinalis*, C-I; *Selenoph. c. cassiopeia*, F-X. DANAIDAE: *Anosia g. gillippus*, F-IV, X, XI; *Lycorea cleobaea atergatis*, C-V. HELICONIDAE: *Dryad. agr. van. maculosa*, C-VIII, F-X; *Dryad. phaetusa*, F-IV, V, VIII, X; *Dryas julia alcionea*, C-I, V, F-IV, V, VIII, X; *Phil. w. wernickei*, C-I, V, VIII. Hel.: *Eueides i. isabella*, C-I; *Hel. ethilla chapadensis*, C-V; *C-V*; *d. doris*, F-VIII; *wall. flavescens*, F-X; *burneyi hubneri*, F-VIII, XI; *xanthocles melete*, C-I, V, F-VIII; *erato phyllis*, C-I, V, VIII, F-IV, V, VIII, X, XI; *numatus superioris*, C-III (EF); *sara*, *thamar*, F-X (EF); *Semelia aliphara*, C-I; *vibilia unifasciata*, C-I, V, F-VIII. HESPERIIDAE: *Hesperinae*: *Aides epitus duma*, F-II (EF); *Apustus menes*, C-V, F-V; *Artines aepitus*, F-IV, V, XI; *Callim. inter punctatus*, F-IV, V; *juventus*, C-V, F-V; *Carystoides noseda*, F-IV; *Cyclosma altama*, F-II (EF); *Cymaenes warreni*, at Diamantino-XI; *Hyleph. p. phylaeus*, F-IV, X; *Lerodea erythrosticta*, C-I; *e. eufala*, F-IV; *Morys g. geisa*, F-V; *Nicon. linga*, C-V; *Nyct. n. nyctelius*, F-IV; *Panoqu. chapada*, C-I, IV; *ocola*, F-XI; *sylvicola*, F-IV, V, VIII, X; *trix*, F-V, VIII; *Perich. philetes dolores*, F-III, (EF); *p. philetes*, F-II (EF); *Phanes almoda*, F-V;

Polites vibex catilina, F-IV,VIII,XI; *Pomp. pompeius*, C-I, F-IV; *Saliana longirostris*, F-V; *salus*, C-V; *Synale mitella*, F-V; *Thargella c. caura*, F-VIII; *Thrac. c. cleanthus*, F-IV; *Vettius artona*, C-V; *m. marcus*, F-IV,VIII. *Pyrginae*: *Achl. busirus* heros, F-IV,V,VIII; *mithridates peruvianus*, F-VIII,X; *busirus rioja*, C-V; *Aethilla melas*, F-V; *An. sempit. simplicior*, F-X; *Antigonus erosus*, F-X,XI; *Camptopl. auxo*, F-IV,V; *Carrh. canescens laeda*, F-XI; *Chiom. punctum*, C-VIII, F-V,X,XI; *Clito bibulus*, F-X; *Cogia calchas*, F-IV,V,X,XI; *cerradicola*, C-V,VIII; *hassan evansi*, C-V,VIII, F-VIII; *grandis*, F-VIII; *Ebr. a. anacreon*, C-I, F-X; *Gesta gesta*, F-IV; *heteropterus*, F-VIII; *Gorgyth. b. begga*, C-I; *beggira ecalophoides*, C-VIII, F-VIII; *begga pyralina*, F-XI; *Heliopt. alana*, F-VIII; *a. arsalte*, C-V,VIII, F-IV,XI; *petrus*, F-V,VIII; *domicella willi*, F-X; *Milanion h. hemes*, F-IV; *Mylon jason*, C-I; *Nison. castolus*, C-V; *macarius*, F-V,X; *Pol. p. polycytor*, F-X; *Py. oileus orcus*, F-X,XI; *Pythion jovanus fabricii*, C-I,V, F-V; *herennius lusorius*, F-IV; *Quadrus cerealis*, F-V; *u-lucida*, F-V; *Spath. clonius*, F-IV,X; *Timoch. t. trifasciata*, C-V, F-X; *Trina g. geometrina*, C-I, F-IV; *Viola minor*, C-I; *violella*, F-V,VIII,X,XI; *Xenoph. tryxus*, C-I,V, F-V. *Pyrrhopyginae*: *Microceris vatericolor*, C-VIII; *Myscelus e. epimachia*, F-V,VIII; *Pyrrhop. sergius ganus*, C-VIII; (many sp. of subfamily also taken I,II, by O. Mielke, list not at hand). *Urbaninae*: *Aguna a. albitraria*, C-I, F-IV,VIII; *a. asander*, C-I, F-IV; *ganna*, F-V; *m. megaeles*, F-IV; *Astraptus c. creteus*, F-VIII, f. *fulgurator*, F-V,VIII,X; *granadensis*, F-V,X; *parisi*, F-VIII; *Aut. neis*, F-VIII,X; *zarex*, F-IV,V; *Celaen. punctiger*, F-XI; *Chi. c. catillus*, F-VIII,XI; *Chrysopol. p. perniciosum*, F-III (EF); *Sarmientoia eriopsis*, F-V (EF); *Typhandrus crameri*, F-X; *undulatus*, F-IV,X; *Urb. doryssus albicuspis*, C-I, F-VIII; *chalco*, F-IV; *d. dorantes*, F-IV,X; *esta*, V,VIII; *p. proteus*, C-V, F-IV,VIII,XI; *simplicius*, F-XI; *teleus*, F-IV. *ITHOMIIDAE*: *Aeria olena* ssp. n., F-VIII; *e. elara*, C-I,V, F-IV,V,VIII,X; *Mechan. polymnia angustifascia*, F-IV,V; *lysinnia connectens*, F-IV,V; *Tithorea harmonia pseudonyma*, F-V (very low number of species). *LYBETHIDAE*: *L. carinenta*, C-X, F-X. *LYCAENIDAE*: *Leptotes cassius*, C-VIII; *Hemiarctus hanna*, C-V, F-IV,V,VIII,X; *Macusia satyroides arachne*, F-V,VIII; *Mithras hemon*, C-V, F-X; *Pseudolycaena marsyas*, C-I,V; *"Thecia"* undivided: *ambrax*, F-X; *bazochii*, F-VIII; *"beon"*, F-IV,X; *bubastus*, F-V; *celmus*, F-X; *crambus*, F-IV; *ericus*, F-X; *guacanagari*, F-V; *mantica*, F-VIII; *mulucha*, F-XI; *ocrisia*, F-VIII; *aetulus paraguayensis*, F-IV,V,VIII,X; *syncellus*, F-X; *telea*, F-X; *xeneta*, F-X. *MORPHIDAE*: *Morpho menelaus mattogrossensis*, C-V; *helenor pindarus*, C-I,V,VIII, F-IV,V,VIII,X. *NYMPHALIDAE*: *Apat. Doxocopa agathina*, F-X. *Argynn.*: *Eupt. hegesia*, F-XI. *Bibl.*: *Biblis hyperia*, C-I,V,VIII; *Mestra apicalis*, F-V,XI. *Callicore*: *Callicore astarte astartoides*, C-I, F-V,VIII; *pygas* ssp. n., F-XI; *hesperis*, F-V; *hystaspes*, C-I; *sorana*, C-I,VIII, F-IV,V,VII,XI; *Diathria clymena*, C-I,V,VIII, F-VIII,XI; *Paulogramma peristera pujoli*, F-V,VIII,XI. *Charax*: *Hypna c. clytemnestra*, F-VIII,X; *Memphis arachne amenophis*, C-I,VIII, F-VIII; *cratais*, C-I,V; *oenomais*, F-VIII; *p. philomena*, C-VIII, F-VIII; *r. ryphaea*, C-I,V, F-IV,VII,X; *morvus sthenon*, C-I,VIII, F-VIII; *Prepona amphimachus*, C-V,VIII, F-IV,V,VIII; *demophon antimache*, C-V, F-IV,VIII; *rothschildi cuyabensis*, F-II (EF); *d. demophon*, C-I,V,VIII, F-IV,V,VIII,X; *laertes icarios*, F-VIII; *pheridamas*, C-VIII, F-VIII; *dexamenes psacon*, C-I,V; *sp. n.*, F-V; *Siderone marthesia*, C-I, F-V; *Zaretas vulpina*, C-I,V,VIII, F-IV,V,VIII,X. *Colob.*: *Coea acheronta*, C-I; *Colob. dirce*, C-I,V,VIII, F-IV,V,VIII,X; *Hist. odjus*, C-I,V, F-VIII,XI; *Smyrna blomfieldia*, C-I, F-IV,V; *Tigridia aesta*, F-V,VIII. *Epiphil.*: *Caton. acoutius*, C-I,V,VIII, F-V, VII,XI; *n. numilia*, F-VIII; *Nessaea obrinus*, F-VIII,X; *Nica flavilla lunigera*, C-I,V,VIII, F-IV,V,VIII,X; *Peria lami*, F-VIII; *Pyrrhogyra amphira arge*, F-IV; *Temenis heubneri*, F-V; *laothoe meridionalis*, C-I,V,VIII, F-IV,V,VIII,X. *Eunic.*: *Eunica bechina*, C-I,VIII, F-X; *tatila bellaria*, F-VIII; *caresa*, F-X; *europa*, F-VIII; *margarita ingens*, F-V,X; *macris*, C-VIII; *maja*, C-I; *mygdonia*, C-I, F-VIII; *venusia*, F-X; *Hamadr.*: *H. amphinome*, C-I,V, F-VIII; *arinome*, C-I; *epinome*, C-V, VIII, F-VIII; *februa*, C-I,V,VIII, F-VIII,X; *feronia*, C-I,V,VIII, F-V,VIII,X; *laodamia*, C-V,VIII, F-V,VIII; *chloe xenia*, C-I,VIII. *Limn.*: *Adelpha phliassa bertolme*, C-V, F-V,VIII,X; *i. iphiclus*, F-V,VIII,X,XI; *p. pleasure*, F-VIII; *thoasa*, F-V; *cocale urraca*, F-III (EF), V,VIII; *Dynamine agaces*, C-VIII, a. *athemon*, C-V; *egaea*, C-I,V. *Marpes.*: *M. berania*, F-VIII; *chiron*, C-V,VIII, F-X,XI. *Melit.*: *Chlosyne lacinia saundersii*, F-IV,VIII; *Eresia eunice esora*, C-I; *Phyc. augusta*, C-I; *teletusa burchelli*, C-I,VIII; *lirope claudina*, F-V,X,XI; *hermas*, C-I,V, F-IV,X; *ithra*, C-I. *Nymphal.*: *Anartia jatrophae*, C-V, F-IV; *Cynthia myrinda*, C-V; *Hypanartia lethe*, C-V; *Junonia e. evarate*, C-I, F-IV,V,VIII,X; *Neopocles jucunda*, F-V,X; *Siproeta s. stelenes*, F-V,X,XI. *PAPILIONIDAE*: *Battus p. polydamas*, C-VIII, F-IV,VIII,X; *Papilio a. androgeus*, F-X; *thoas brasiliensis*, C-V; *thoas cinyras*, F-IV,V,X,XI; *Parides neophilus consus*, C-I,V; *anchises orbignyanus*, F-V,X; *Priamides a. anchisiades*, C-I; *Protesilaus agesilaus autosilaus*, C-VIII; *orthosilaus*, C-VIII, F-V. *PIERIDAE* (very few sp.): *Col.*: *Aphrissa statira*, C-V,VIII, F-VIII,X; *Eurema albulia*, F-IV,VIII,X,XI (in an isolated forest remnant a dwarf form was very constant, like a *Leucidia*); *jucunda lemnia*, C-I,V, F-IV,V,X,XI; *Phoebis argante*, C-V, F-IV,VIII,X; *p. hilea*, F-XI; *s. sennae*, C-I,V,VIII, F-IV,V,X,XI; *Pyristitia dina leuce*, C-I,VIII, F-X,XI; *pseudomorpha*, C-I, F-V,VIII; *nise tenella*, C-I,V,VIII, F-IV,V,VIII,X,XI; *Rhabdodryas trite*, F-VIII. *Dis.* & *Euchl.*: none. *Pier.*: *Glutophrissa drusilla*, F-VIII, X; *Metete lycimnia narmia*, C-VIII, F-VIII. *RIODINIDAE*: *Euselasiinae*: *E. a. authe*, F-X; *c. crinon*, F-III (EF), VIII; *gelandor erilis*, F-VIII; *h. hygenius*, F-V,VIII,X. *Riod.*: *adelotypa heubnera*, F-IV,V,VIII,X,XI; *senta*, F-V; *Alesa prema*, C-V; *Amarynthus meniera*, F-IV,V; *Anteros formosus*, F-VIII; *Andre epulus*, F-V,X; *propitia*, F-XI; *Calospila emylus*, F-IV; *lucianus pseudocrispus*, F-V,X; *Chalodeta chaonitis*, F-X; *Chamaelimas tulcis pansa*, F-V,VIII; *Charmona zama*, F-V,VIII,X,XI; *Ematurgina axenus*, F-V; *Emesis diogenia*, C-VIII; *lucinda*, F-IV,V; *mandana*, F-X; *Esthemopsis sericina*, F-V; *Eurybia elvina passerula*, F-IV,V,VIII; *Hyphylaria parthenis tigrinella*, F-V,X; *Ithomeis aerella*, C-V; *Lasaia a. agesilaus*, F-VIII; *meris*, F-I (EF); *Leucoclimona lagora*, F-IV; *p. philemon*, F-IV,V,VIII; *Melanis xarifa*, F-X; *zoega*, F-X; *Mesene phareus* ssp., F-IV,VIII; *Mesosemia philocles laetifica*, F-V; *Nothome o. ouranus*, F-X; *Nymphidium baetium*, C-V, F-IV,VIII; *caricae carmentis*, F-X; *chione*, F-VIII,X,XI; *medusa galactinus*, F-V,VIII,X,XI; *lisimon* ssp., F-X; *undimargo*, F-V,X; *Parcella amarynthina*, F-VIII; *Perophtalma t. tullius*, F-V; *Rhetus arcus*, F-X; *Stalactis phlegia phlegetonia*, F-IV,VIII,XI; *Synarge r. regulus*, F-XI; *Thysanota galena*, F-XI. *SATYRIDAE* (incl. some "Euptychia" awaiting determination): *Antirrh.*: *Caerolis chorinea*, F-X; *Triteuta multiades murena*, F-VIII. *Biinae*: *Bia actorion*, F-V,VIII,X. *Euptych.* (Forster's genera not being considered): *armilla*, C-I, F-IV,XI; *a. arnaea*, F-IV,V,VIII; *fallax*, F-V; *hermes*, C-I,V,VIII, F-IV,V,VIII, X, XI; *herseis*, F-XI; *ocelloides*, F-I (EF); *o. ocirrhoe*, C-I,V,VIII, F-IV,V,VIII,X,XI; *ocypete*, F-IV,V,VIII; *palladia*, C-I; *penelope*, F-VIII; *pharella*, C-V; *phronius*, C-I,V, F-IV,V,VIII,X; *polyts*, C-I,V, F-V,VIII; *strigillata*, C-V,VIII, F-V,VIII; *summandosa*, C-V, F-IV,V; *taygetis penelope*, C-V, F-V; *Pseudodebis valentina*, F-V; *Taygetis chiquitana*, F-X; *celia*, C-V, F-V,X; *e. echo*, F-IV,V,VIII,X; *erubescens*, C-V, F-V,X; *godmani*, C-V, F-V, Korea, C-I; *mermeria*, C-I, F-V; *sosis*, C-I, F-V,X; *t. thamyra*, C-V,VIII, F-V,VIII; *tripunctata*, F-IV; *v. virgilia*, C-I,V, F-V,VIII. *Haeter.*: *Pierella lamia chalybaea*, C-V, F-IV,V,X; *hyalina dracontis*, F-V. *Pronophila*: *Amphidecta calliomma*, F-IV,VIII; *p. pignator*, C-V,VIII; *reynoldsi*, C-VIII, F-VIII. The 336 determined species, along with about 2 dozen yet to be defined, are accessible in the collections of H. Ebert & E. Furtado for the perusal of any interested scientist.

ECUADOR: Contributor: Donald M. Strasburg. Strasburg spent 30 May-16 June collecting in the Hotel Tinalandia are, 12 km E. of Santo Domingo de los Colorados. As previously reported by others, May 1978 again featured an amazing flight of butterflies, moths and other insects at Sto. Domingo, and this persisted at least until mid-June. The Lepidoptera taken totaled 1194, representing 400-500 species. As one approached the Sto. Domingo area, butterflies became increasingly abundant on the highway, especially *Actinote equatoria* & *A. ozomene*. At Hotel Tinalandia, blossoming trees and pasture shrubs were alive with sun-loving butterflies, while the shady forest trails swarmed with ithomines and satyrids. Moths also abounded, and a collection of about 150 showy saturniids, noctuids and sphingids was obtained simply by picking specimens from the walls, eaves and other structures of an all-night gasoline station on three successive mornings. Continuous rain resulted in no catch at all on a 2-day drive to Puyo. Space permits only a partial listing of species obtained; in addition much of the collection has not yet been identified. The following are among the species taken: *Parides iphidamas calogyna*, *P. lycimenes paralius*, *P. t. timias*, *P. anchises* (?) subsp. nov. (series of 7 ♀s), *Papilio euryleon haenschii*, *P. a. anchisiades*, *P. torquatus leptalea* (2 ♀♀ forms), *P. epenetus*, *P. thoas neales*, *P. a. androgeus*, *Battus p. polydamas*, *B. belus varus*, *Caerolis gerdrudtus vespertilio*, *Pierella cercye*, *Dulcedo polita*, *Taygetis chrysogone*, *Heliconius eleuchia primularis*, *H. cydno haenschii*, *H. cydno alitheia*, *H. s. sappho*, *H. melpomene sticheli*, *H. erato cyrbia*, *H. atthis*, *H. edias*, *Panacea procilla*, *Precis evarate* with large pink HW ocelli much like *coenia*, *Marpesia petreus*, *M. merops*, *M. berania*, *M. chiron*, *M. coresia*, *M. marcella*, *M. iole*, *Siproeta s. stelenes* with very narrow discal band, *Pyrrhogyra edocla lysanias*, *Smyrna blomfieldia*, *Adelpha felderi*, *A. zina*, *A. cytherea* (common on feces), *Diathria marchali*, *D. pavira*, *Hamadryas amphinome*, *H. arethusa*, *H. rhea*, *H. feronia*, *Doxocopa cherubina*, *Anartia amathea*, *A. jatrophae*, *Callicore manova*, *Archonias tereas rosacea*, *Dismorphia amphione* (courting behavior and nuptial flights observed), *D. theonoe*, *Enantia melite*, *Enantia* sp. (black and white), *Perceute lecodrosine bellatrix*, *Leodonta dysoni*, *Itaballia tithoreides*, *I. marana*, *Colias cesonia*, *C. dimera* (3000 m altitude, nr. Aloag), *Eurema arbella pomponia*, *E. leuce*, *E. albulia*, *Leptophobia olympia*, *L. penthica* (2000 m altitude), *L. caesia*, *L. eleusis*, *Perrhybris pamelia flammula*. Among the showier Saturniidae

were *Dysdaemonia boreas* (both sexes at lights, wingspan up to 140 mm, markings vivid), *Eacles collaris*, *E. fairchildi*, *E. masoni*, *Citheronia phoronea*, *Arsenura erythrinae*, *Copaxa decrescens* (σ s only, several color forms), *C. multifenestrata*, *Rothschildia arethusa* (?), *Diphrasia biremis*, *Automeris postalbida*, *A. catharina*, 3 unid. species of *Automeris* & 2 unid. *Adeloneivaia*. This material from western Ecuador includes long series for the genera *Parides*, *Dismorphia* and others, with interesting infraspecific variation together with intergradation with material collected earlier in Colombia and Brazil.

ZONE 11: ONTARIO. Coordinator, Quimby Hess (QH). Contributors: Sidney M. Daniels (SD), Dave Elder (DE), Nick Escott (NE), W.D.J. Eberlie (WE), Norman A. Tremblay (NT), R.R. Tasker (RT), Alan Wormington (AW). Collecting was generally good in S., but poor in N. because of repeated rains. Spring was late, in contrast to 1977, with first hibernators seen 22 April, Huron Co., and first *P. rapae*, 6 May. SD's take of 30 species in Norfolk Co., 24 June, included 5 spring species, as *E. juvenalis* & *C. nippon*, while the same date in 1977 had yielded seven July species, as *E. vestris metacomet*. N. of Lake Superior snow cover lasted through late April, more fell 9 June, followed by cool, damp summer and mild fall; first snow 10 Nov. AW reported a *D. plexippus*, 28 Sept. on south shore of James Bay, headed north (? another Wrong-way Corrigan). *Oeneis macounii* & *O. jutta ascerta* were reported. The life history of *C. tullia inornata*/ *nipisiquit* in S. Ontario was worked out (WE). *L. archippus* larva on *Populus balsamifera* in Studholme Twp. nr. Hearst, 12 June; *P. coenia* reappeared in S. Ontario; *C. harrisii* was noted in areas where it had not been seen previously; *V. cardui* occurred in above average numbers. *Lycaenidae* generally were scarce, but *E. laeta* was reported nr. Dwight, a new locality; *E. dorcas dorcas* was noted about *Potentilla fruticosa*, 5 Aug., σ and some η from Oliphant to Dorcas Bay along the margin of Lake Huron (QH). A worn η *E. nicippe* was photographed by Marie Wilson, 21 June, nectaring at *Corydalis sempervirens* in Quetico Prov. Pk. (QH; only prev. record Point Pelee). *P. occidentalis* was not observed in Atikokan (DE); *P. napi oleracea* was unusually numerous; *P. virginensis* was found breeding in a new site in lower Francis Brook ravine, Manitoulin Island, along with *P. napi oleracea*, *E. ausonides*, & *E. olympia* (RT); and a new location for *E. olympia* was discovered in E. Ontario. *B. philenor* was reported at Port Burwell & Ajax; *G. marcellus* nr. Brantford; *P. glaucus* was low (? secondary to heavy *M. dissidia* infestations in 1977). *Saturniidae* were generally low in N. & C. Ontario.

ZONE 2: PACIFIC NORTHWEST. Idaho, Oregon, Washington, & British Columbia. Coordinator: Jon H. Shepard (JS). Contributors: Jim Brock (JB), Nelson Curtis (NC), Chris Guppy (CG), John Hinchliff (JH), Stanley Jewett Jr. (SJ), Jon Pelham (JP), Robert Pyle (RP).

General Conditions: weather good and collecting excellent in all regions visited.

Migratory Species: Though there were only two reports from contributors (Lookout Mtn., el. 6000', Hood R. Co. Oregon, July 22, JH, and Wilson Ck., el. 1700', Walla Walla Co., Wash., 9 June, JP), several reliable naturalists have reported the Monarch from eastern Washington and south central British Columbia. *C. cardui* only from coastal Oregon and Washington, except as recorded below, not common. *C. virginensis* common at Scherer's Bridge, Wasco Co., Oregon 3 Sept. (RP), usually only observed as single individuals in the PNW. Only one record of *N. californica* at 8 mi. E Cawston, BC, 1 July (JS). *V. atalanta* recorded only from coastal areas where it is a resident.

IDAHO: ADA Co., Swan Falls Dam, 21. 2500', 3.9 mi. ENE Murphy 30 April-1 May (JP) *P. rapae*, *E. ausonides*, & *P. zephyrus*. COUNTY: Canyon Co., Dautrich TNC Preserve, T25N, R44W, BM. sec. 31, 39.5, 6, 1 May (RP) *P. rapae*, *C. philodice*, *C. cardui*, & *N. antiopa*. COUNTY: Latah Co., Kendrick, 15 Sept. (NC) *A. mormo*. COUNTY.

OREGON: SJ reported good collecting all season at West Linn, Clackamas Co.; *Tyria jacobaeae* and a single *C. relicta* were of note. BUTTERFLIES: Curry Co., 2 mi. N Gold Beach 27 May (SJ) *P. sonora*, COUNTY; *P. saepiolus*, COUNTY; *C. t. californica*. 10 mi. SE Agness 29 May (SJ) *P. sisymbrii*, *E. ausonides*, *M. nelsoni*, all COUNTY. Deschutes Co., Cultus Creek 1 mi. from Cultus Lake 6 July (JB) *P. eurymedon* & *C. palaemon*, both COUNTY; Three Creek Meadows, Deschutes Nat. For. 19 June (JH) *T. mexicana nevada* common. Jackson Co., Williams 4 Oct. (SJ) *A. campestris* fresh σ , *H. columbia* fresh η , several *J. coenia* (Jewett comments that *J. coenia* was common in all SW Oregon in 1978). Josephine Co., Eight Dollar Mtn. Rd. 29-31 May (JH) *H. columbia* scarce. Lake Co., Drake Pk., el. 8000' 29 July (JH) *N. ridingsi* (re-taken). Tillamook Co., Cascade Head TNC Preserve, N of Lincoln City 3 Aug. (RP) *C. anabella* larvae on *Malva* sp.

WASHINGTON: Asotin Co., Lick Creek, el. 3200', 16.8 mi. SE of Pomeroy 12 July (JP) *E. persius*, *P. oregonius*, *L. nivalis*, *L. argyrognomon*, *S. battoides*, *S. enoptes*, *V. atalanta*, *C. cardui*, *P. tharos*, *S. atlantis*, *S. hydaspe*, *C. oetus*, all COUNTY; Asotin Cr. nr. Mt. Kearney Gulch, el. 1000', 12 July (JP) *H. comma*, *P. communis*, *C. cardui*, all COUNTY. Benton Co., Dry Cr., 7.2 mi. SSE of Priest Rapids Dam, el. 1150' 14 April (JP) *C. sheridani*, COUNTY. Cowlitz Co., 2 mi. SE Vader water intake 29 July (RP) *E. vestris*, *P. rutulus*, *P. clodius* COUNTY, *P. napi*, *V. atalanta* COUNTY. *P. mylitta* COUNTY, *S. c. leto* COUNTY; Abernathy Hills 1-3 mi. S of Ryderwood 29 July (RP) *E. vestris*, *P. rutulus*, COUNTY, *P. napi*, *P. satyrus* COUNTY, *C. pegala* COUNTY. Douglas Co., Ruud Cyn., Badger Mtn. el. 32-3500' 17 June (JP) *E. persius*, *P. rutulus*, *L. nivalis*, *L. lorquini*, *N. milberti*, *N. antiopa*, *P. campestris*, *C. oetus*, all COUNTY. Ferry Co., Canyon Cr. Rd., 9 mi. WSW Kettle Falls, el. 2300' (JP) *S. cybele leto* COUNTY; Lambert Cr., el. 35-3800', 5.6 mi. E of Pollard 27 June (JP) *E. icelus*, *H. comma*, *H. juba*, *P. coras* STATE, *P. themistocles*, *A. vialis*, *P. zelicaon*, *P. multicaudata*, *E. ausonides*, *L. nivalis*, *P. battoides*, *C. palla*, *E. anicia*, *E. editha*, *S. callippe*, all COUNTY; Herron Cr., el. 3000', 5.8 mi. N. ... Republic, 27 June (JP) *P. oreas*, *P. tharos*, *S. piasus*, all COUNTY. Garfield Co., Abels Point, el. 5272', 15.4 mi. S of Pomeroy 11 July (JP) *A. sara*, *E. epipsodea*, both COUNTY; Clearwater lookout, el. 5600', 18.4 mi. S of Pomeroy 12 July (JP) *E. icelus*, *G. lygdamus*, *C. anabella*, *E. editha*, all COUNTY; Elk Point, el. 5241', 19.2 mi. SSE of Pomeroy 12 July (JP) *S. atlantis* COUNTY; Pataha Cr., el. 37-3950', 13 July (JP) *H. comma*, *E. persius*, *P. phoebus*, *P. rutulus*, *P. multicaudata*, *P. occidentalis*, *E. editha*, *L. nivalis*, *L. helliodes*, *L. argyrognomon*, *P. saepiolus*, *P. icarioides*, *S. battoides*, *S. enoptes*, *C. argiolus*, *L. lorquini*, *C. cardui*, *N. milberti*, *N. antiopa*, *P. satyrus*, *P. faunus*, *P. zephyrus*, *P. campestris*, *E. colon*, *B. epithore*, *S. zeren*, *S. hydaspe*, *S. cybele leto*, *C. tullia*, all COUNTY. Grant Co., Dry Falls, 2 mi. SSW Coulee City, el. 1600', 1 Sept. (JP) *O. sylvanoides*, *P. oregonius*, *S. melinus*, all COUNTY; Grand Coulee (town) el. 1500', 10 June (JP) *H. ericetorum*, *P. rutulus*, *P. multicaudata*, *P. rapae*, *C. eurymedon*, *V. atalanta*, all COUNTY. Gray's Harbor Co., The Sink, s of Ocean Shores 17 June (RP) *L. helliodes* COUNTY; Carlisle Bogs 17 July (RP) *E. vestris* COUNTY, *P. sonora*, *L. lorquini*, *B. epithore*. Kittitas Co., 1.7 mi. S of Ellensburg 27 Aug. (JP) *P. sabuleti* COUNTY. Lewis Co., Vader 29 July (RP) *P. rapae*, *C. tullia*, both COUNTY; Boistfort Peak Road 29 July (RP) *O. sylvanoides* COUNTY, *P. clodius*, *P. napi*; *P. occidentalis*, *L. lorquini*, *C. cardui*, all three COUNTY; *P. mylitta*; *S. zeren*, *S. cybele leto*, *S. hydaspe*, all three COUNTY. Okanogan Co., Road 3935 x Road 3937, el. 3200', 6.5 mi. ESE of Oroville 2 July (JP) *P. coras* COUNTY; Road 3609 x Milk Cr., 6 mi. WNW of Conconully, el. 3900' 28 July (JP) *P. sonora* COUNTY. Pend Oreille Co., Tiger Meadows, el. 3200', 3.4 mi. WSW of Tiger 29-30 June (JP) *P. satyrus* COUNTY; 4.2 mi. SW Cusick, T32N R43E Sec. 11, el. 2100', 1 July (JP) *P. coras*, *E. vestris* COUNTY. San Juan Co., Long Island 11 May (RP) *P. zelicaon*, *E. amyntula* COUNTY, *E. editha* (abundant) COUNTY. Stevens Co., Flodell Cr., el. 3100', T35N R41E Sec. 12, 29 June (JP) *E. persius*, *P. coras*, *P. themistocles*, *O. garita*, *A. vialis*, *C. philodice*, *C. interior*, *L. argyrognomon*, *P. icarioides*, all COUNTY. Wahiakum Co., 12 mi. N of Cathlamet 17 June (JH) *L. lorquini* COUNTY; Elochoman Cr., 5 mi. NE of Cathlamet 13 Aug. (RP) *P. rapae*, *P. napi*; *L. helliodes*, *P. mylitta*, both COUNTY; Puget Island 13 Aug. (RP) *O. sylvanoides*, *P. rapae*; *P. occidentalis*, *C. eurymedon*, *V. atalanta*, *C. cardui*, *N. milberti*, last five COUNTY. Walla Walla Co., Wilson Cr., el. 1700', 4.1 mi. SE of Waitsburg 9 June (JP) *P. multicaudata*, *L. nivalis*, *S. battoides*, *P. satyrus*, *D. plexippus*, all COUNTY; Jasper Mtn. Rd., el. 28-3200', 9 mi. SE Waitsburg, 9 June (JP) *P. eurymedon*, *C. philodice*, *A. sara*, *C. eryphon*, *S. melinus*, *L. editha*, *L. helliodes*, *N. antiopa*, *C. palla*, *P. tharos*, *P. campestris*, *C. pegala*, all COUNTY. Yakima Co., Gotschen Cr. Gurad Station, T7N R10E 25 June (RP), 30 June (JH) *P. mardon* (RP observed them abundant, nectaring on vetch, and mating circa 6:00 pm), *C. palaemon*, *P. occidentalis*, *E. ausonides*, *C. eryphon*, *L. helliodes*, *L. argyrognomon*, *P. icarioides*, *C. lygdamus*, *P. saepiolus*, *E. amyntula*, *P. faunus*, *P. campestris*, *B. epithore*, *S. coronis*, *O. nevadensis*.

BRITISH COLUMBIA: Coastal Region: 9 km. NW Yale, el. 3900' 19 July (CG) *P. clodius*; 10 km. S of Yale el. 1000', 19 July (CG) *P. clodius*; Poison Mtn., 15 km. N of Lillooet, el. 5500' 28 July (CG) *P. phoebus smintheus*; el. 65-7500' 1 Aug. (CG) *P. phoebus olympianus*; Shulaps Range, Big Dog Mtn., Elizabeth Mines, el. 7300' 2 Aug. (CG) *L. phlaeus*, *L. cupreus*; Kootenay Region: Yoho Valley, 30 June (CG) *P. zelicaon*; Rykert Cr., Nr. Creston 19 June (JS) *O. garita* (2nd B.C. record); Okanogan Cascade Region: Crater Mtn., nr. Keremeos, el. 7000' 15 July (JS) *P. centaureae*, *O. melissa*, *B. freija*, *E. editha*; el. 5000' *E. vidleri*, *P. sonora*, and 35 other species; Botanie Valley, 20 km. NE Lytton 6 July (JS) *C. occidentalis* (1st mainland B.C. record); 8 km. E Cawston 1 July (JS) *P. themistocles*, *L. nivalis*, and 32 other species.

ZONE 9: NORTHERN NEOTROPICS: Coordinator: Eduardo C. Welling M. Contributors: Richard Bailowitz, William H. Howe, James Jacques, Edward G. Riley, Thomas T. Riley.

Weather Summary: While drought conditions prevailed over northern and north-central Mexico, the southeast of the country experienced very heavy rainfall during the normal wet season. In the Yucatan peninsula it was very excessive, and trying to dry catches was really a trick.

MEXICO: BAJA CALIFORNIA NORTE: Welling collected during April and May noticing lush conditions in the northern parts of the state after the excessive winter rains. Nevertheless, some populations were late at the higher elevations, others were normal. Some species were almost absent while others abounded. Local inhabitants commented that the number of butterflies was lower than normal according to their casual observations. Some of the more interesting captures or sightings were Papilio eurymedon, zelicaon, rutulus (1 only), Anthocaris sara, lanceolata, Euchloe hyantis, Colias harfordii, Chlosyne gabbi, Thessalia leanira, Limenitis bredowii, Plebejus acmon or lupini, icarioides (1 only), Phaederotes piasus (1), Philotes sonorensis (1 very late ♀), Atlides halesus, Callophrys dumetorum, Satyrus saepium, Polites sabuleti, Heliopsis ericetorum, Systasea evansi.

SONORA: Bailowitz collected near Magdalena 30 Sept. and found Battus philenor, Papilio cressphontes, polyxenes, Pieris rapae, Eurema nicippe, boisduvaliana, Phoebis senna, agarithe, Nathalis iole, Colias eurytheme, agraulia vanillae, Danaus gilippus, Libytheana bachmannii, Strymon melinus, Brephidium exilis, Phyciodes tharos, texana, Cynthia cardui, Asterocampa leila, Jerema accius, Chionides catillus, Hylephila phyleus, Pyrgus communis, oileus, Chiomara asychis, Timochares ruptifasciatus.

TAMAULIPAS: E. G. Riley found conditions dry near Gomez Farias from 2-8 April, finding most things slightly to very worn, but with some very fresh exceptions. Found were Graphium philolaus, phaon, Papilio montezuma, Itabalia viardi, Heliconius charitonius, petiveranus, Opsiphanes boisduvali, Myscelia ethusa, Callicore sp., Smyrna blomfieldia, Doxocampa pavon, Prepona sp., Anaea aldea, pithysa, glycerium, forreri, fabius, Eumaeas debora. Jacques on 26 April found conditions dry near Antiquo Morelos, seeing mostly G. philolaus, Euptoieta hegesia, and Anteos clorinde.

SAN LUIS POTOSI: T. T. Riley on 1-4 Dec. in the Tamazunchale area, collected Eumaeas debora and minyas, Anaea forreri, eurypyle, Doxocampapavon, laure, Epiphele adrasta, Victorina steneles, epaphus, Smyrna blomfieldia, Hamadryas februa, guatemalensis, glaucome, Hypanartia godmani, Lethe, Dione moneta, Heliconius ismenius, Lymanas cephe, Dis-morphia melete. Howe collecting in the same region found flights only starting during 1-15 March, collecting Graphium protesilaus, philolaus, Papilio thoas, Battus polydamas. In late August-September he returned and found Citheronia mexicana, Automeris metzli, Eacles imperialis, Rothschildia orizaba, Sematurus luna, Papilio astyalus, androgeus. Going up to Xilitla and nearby, Catonephele numilia, Historis odius, Prepona sp., Hamadryas amphionome, Caligo uranus, Tithorea tarricina, Morpho peleides were found. Jacques in the same general region in mid-April found many of the same species plus Dircenna klugi, Anartia fatima, Callicore anna, Catasticta nimbice, Athena petreus, coresia, chiron, Dynamine mylitta, Doxocampa cherubina, Ascia monuste, Pheobis intermedia = neocypria, Itaballia viardi, Papilio photinus, victorinus, cressphontes, Agraulis vanillae, Dione juno, Dryas julia, Diorina arcus, and once again Caligo uranus, always a good catch. Around Itzacamel in late April Jacques found different species such as Graphium epidaus, Papilio erostratus, Myscelia ethusa, Biblis hyperia, Didonis agonisa, Danaus plexippus, gilippus. Next stop at Ciudad Valles produced Battus philenor, Papilio anchistades, Graphium belesis, Prepona demophon, Chlosyne janais, Opsiphanes quiteria.

MORELOS: Jacques in early May at el. 2100 m. near Cuernavaca saw Papilio multicaudatus, victorinus, garamas, Morpho polyphemus.

MICHOACAN: in late April Jacques found P. multicaudatus, garamas, Dryas julia, Agraulis vanillae near Morelia.

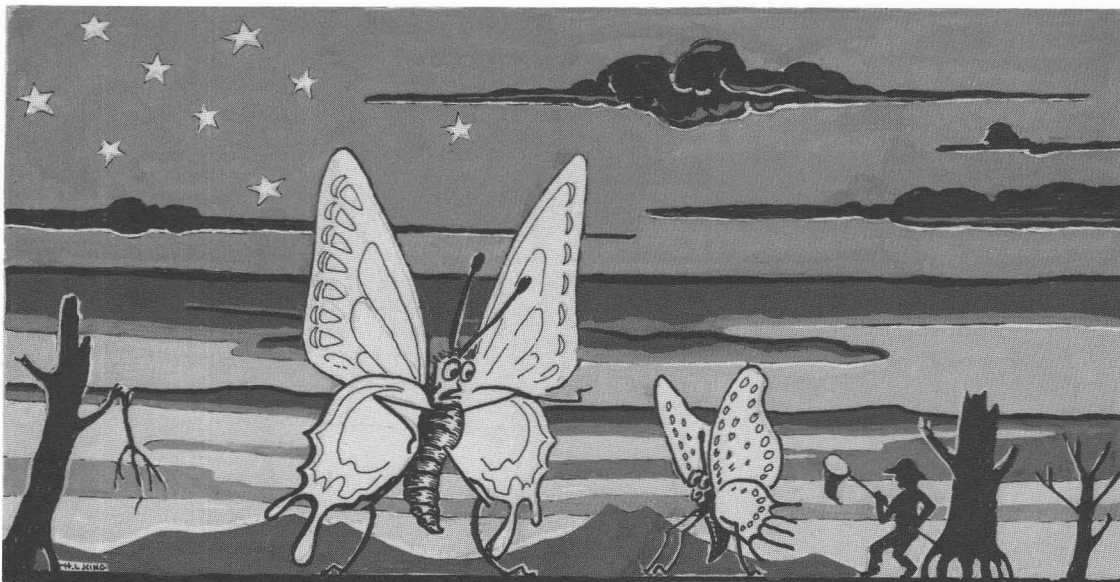
QUERETERO: P. multicaudatus was observed by Jacques near Tequisquiapan in late April, el. 2000 m.

DISTRITO FEDERAL: Jacques in early May found Papilio garamas, multicaudatus, and Nymphalis antiopa in large numbers.

HIDALGO: Howe went to Cuesta Colorado 3 March and found flights just beginning, capturing Papilio pilumnus, Graphium thymbraeus, Limenitis bredowii, Eumaeas debora. At Pisaflores in Sept. he found Callicore astala, Cyclogramma pandama, Papilio victorinus, abderus. Near Actopan Jacques found Papilio multicaudatus, garamas, & Hades noctula 19 April.

YUCATAN: Welling observed exceedingly good collecting conditions for the first time in several years, and many things never before seen in quantity were present. Some species remained scarce, however, Myscelia ethusa as an example. Notoriously scarce were Saturidae and Sphingidae, down in numbers from 1977 & 1976. A Copiopteryx is a STATE RECORD. QUINTANA ROO: Welling saw a repeat of 1977 in northern areas of the state, fantastic quantities of just about everything, some species being more common than at any time during the last 25 years. Saturniidae and Sphingidae rare here also, not counterbalancing with the butterflies. Several specimens of Copiopteryx were found, more than during the last 25 years of collecting. Pholus fasciatus was taken for the first time in the state. Three specimens of a Dynastor sp. were taken in the northern part of the state. Eueides cleobaea way up in numbers after 10 years' scarcity.

EL SALVADOR: Jacques collected around San Salvador mid-February, finding things dry, with only fair collecting. At the capital, el. 950 m., he found Heliconius petiveranus, Agraulis vanillae, Anartia fatima, Victorina epaphus, Papilio erostratus. At Parque Chorrros, el. 1025 m., Papilio iphidamas, H. petiveranus. At Lago Coatepeque, el. 1300 m., several good species were taken, as at Cerro Verde, el. 1800 m., including Heliconius hortense, Thecla aegides, Graphium phaon, Mechanitis isthmia = lycidice, doryssus.



JOSE, IF YOU CAN SEE BY THE DAWN'S EARLY LIGHT, YOU BETTER SCRAM

IMPORTANT NOTICES

RAINFOREST COLLECTING EXPEDITION PLANNED. Julian P. Donahue, curator of Lepidoptera at the Natural History Museum in Los Angeles, will lead an Earthwatch expedition to the lowland rainforest of north-eastern Costa Rica, 12 August to 1 September 1979. The primary mission of the team will be to salvage insects (especially Lepidoptera), plants, and herptiles from a virgin forest in the process of being cleared for agricultural purposes. All specimens will be deposited in the Museum, where they will be available for study or loan. Fees contributed by participants underwrite the entire cost of the expedition, and are tax deductible. For more information on this outstanding opportunity for a taste of the jungle, contact Earthwatch, 10 Juniper Rd, Box 127, Belmont, MA 02178, USA, or write or call Donahue, Natural History Museum, 900 Exposition Blvd, Los Angeles, CA 90007, USA; telephone (213) 744-3364.

A SERVICE TO PROVIDE IDENTIFICATION OF PARASITIC HYMENOPTERA in a short time, and at a reasonable cost, is being organized in Gainesville, Florida. The major goal in establishing this service is to serve those groups or persons, particularly Masters and PhD degree candidates, who need to have parasitoids identified as soon as possible. The service presently is accepting Ichneumonoidea, some Chalcidoidea, some Proctotrupoidea, and some Bethyloidea for identification; the service will also identify Symphyta. For information, write to PHIService, c/o 2923 NE 10 St, Gainesville, FL 32601 USA.

THE MARYLAND ENTOMOLOGICAL SOCIETY, which was formed in December, 1971, is pleased to announce the publication of a scientific journal dealing primarily with insects in Maryland and surrounding states. It will contain original articles on geographic and temporal distribution, ecology, biology, morphology, genetics, systematics, behavior, occurrence, migration and others of more general interest for an area often overlooked in the literature. The journal, entitled The Maryland Entomologist, is intended, at present, to be a semi-annual publication. Institutional subscriptions may be obtained for \$6.00 per volume or \$1.50 per number. There are four numbers planned per volume. Philip J. Kean, Sec-Treas, Maryland Entomological Society, 1215 Stella Dr, Baltimore, MD 21207.

WANT RIDE TO ALASKA for the Fairbanks meeting. Can share expenses and driving. Am familiar with the northern British Columbia part of the road from three years collecting. Jon H. Shepard, RR #2, Nelson, British Columbia, V1L5P5 CANADA.

RESEARCH REQUESTS

DATA WANTED ON LEPIDOPTERA collected inside the boundaries of the Death Valley National Monument, for publication of a faunal list. Richard M. Brown, 1055 Plaza Dr. Martinez, CA 94553.

COLLECTION DATA WANTED: Field observations for butterflies of Mineral King Valley & surrounding mountains; also Sequoia & Kings Canyon National Parks. Also need records of foodplants etc. Wayne Dawes, 3304 Buckingham Rd, Glendale CA 91206.

VIABLE OVA OF CERATOMIA CATALPAE or breeding stock of same wanted for the 1979 season. Also correspondence invited with breeders of Spingoidea. Jeffrey Gilbert, Box 356-B R.D #5, Carlisle, PA 17013, USA.

W.J. HOLLAND (The BF Book) says: "The females of *N. Terlooti* are dimorphic, some of them being marked very much like the males, but with the black areas heavier; others.... having the ground color deep red." I need correspondence from anyone who has a ? *terlooti* specimen (private or in museum) that can substantiate Holland's statement. i.e a ♀ whose phenotype has other than the standard orange/red ground color with black markings. Col. Clyde F. Gillette, 3419 El Serrito Dr, Salt Lake City UT 84109.

CORRESPONDENCE WANTED with collectors having field observations of *Hemileuca maia* larval food plant associations. Am interested in notes &/or livestock for comparative study with a local aspen feeding population. Jim Tuttle, 2691 W. Temperance Rd, Temperance, MI 48182.

SPECIMENS NEEDED of the following, for morphological study: all species of Papilionidae, Dismorphiinae (Pieridae), Morphidae, Brassolidae, Megathymidae: *Thysania agrippina* (Noctuidae) *Myelobia smerintha* (pyralidae); large spp of Riodinidae & Pyralidae. Specimens need not be perfect. In exchange I offer some of my publications on Lepidoptera. Prof. Dr. Eugen V. Niculescu, Rue Dr. Lion 6, 70737 Bucarest-7 ROMANIA.

SEEKING POSTDOC, RESEARCH, OR CURATORIAL POSITION, foreign or domestic. Ph.D., Entomology University of California, Davis, Dec 1977. Member Phi Kappa Phi. Chief interests are butterfly systematics and behavior, biogeography, and continental drift. Over 30 publications. C.V. upon request. Oakley Shields, 4890 Old Highway, Mariposa CA 95338.

REQUEST ANY RECORD of any occurrence of *Eupackardia callete* (Saturniidae) within New Mexico and/or pertinent details of same. Would also like to hear from anyone who knows present address (or assignment of the Rt. Rev. H. Falk, a former member of the Leps' Soc.)

NEW PUBLICATIONS

LES ATTACIDAE AMERICAINS ... The Attacidae of America (=Saturniidae).

Attacinae. Claude Lemaire, Pub. by the author, December 1978. 238 pp; 178 text figures; 49 photographic plates; 9 maps. It includes the following genera or subgenera: *Rothschildia*, *Eupackardia*, *Callosamia*, *Hyalophora*, *Samia*, *Calosaturia*, *Agapema*, *Copaxa*, *Antheraea* and *Actias*. of the 72 species (and most of the subspecies) are figured as well as as the ♂ & ♀ genitalia. The text is in French but with lengthy summaries in English for every taxon studied so that the volume can be used by English speaking as well as French readers. Please send orders to Dr. C. Lemaire, 42, boulevard Victor Hugo, F-92200 Neuilly-sur-Seine, FRANCE. Price: U.S. \$60.00 or French Francs 250. Airmail registered postage \$8.50. A detailed notice will be sent on request.

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OBITUARY



*We regret to announce the sudden death of
 MR. B.C.S. WARREN on 22 January, 1979, at
 his home in Folkestone, England. Mr Warren
 will long be remembered for his excellent
 monograph on the genus *Erebia* to which a
 supplement will soon be published by
 Classey & Company.*



NOTICES - Buy, Sell, Exchange

Members of the Lepidopterists' Society are invited to use this section free of charge to advertise their offerings in Lepidoptera. We cannot guarantee any notices, but all are expected to advertise in good faith. By decision of the Board, prices of specimens offered for sale will not be published henceforth. Please be brief, clear and check spelling. Notices will be limited to two appearances. The Editor reserves the right to alter or reject unsuitable copy.

- WANTED: Contact with any collectors planning collecting trips into the arctic areas or the Rocky Mountains. Or any localities not often collected in U.S. and Canada, this season. View to help with expenses for series of surplus species. All serious replies answered. Ken Thorne, Mill St., Delaware, Ontario, Canada NOL1BO.
- WANTED: A complete run of the Ontario Field Naturalist in covers. Cyril F. dos Passos, Washington Corners, Mendham, NJ 07945.
- EXCHANGE: Eastern Canadian Butterflies, perfect with full data, for Worldwide Nymphalidae. Send for free list. R. A. Layberry, 530 Byron Ave, Ottawa, Ontario, Canada K2A OE3.
- FOR SALE: Scudder, Samuel Hubbard, The Butterflies of the Eastern United States and Canada, 3 volumes (1888-89); \$400. or best offer, or will trade for Edwards, W.H. The Butterflies of North America. This is a "working copy" with some damage. Dr. Jack N. Levy, Center for Pathobiology, Univ. of California, Irvine, CA 92717.
- FOR SALE: Literature on Lepidoptera, List on Request. Russell A. Rahn, 411 W. Stewart Ave, Wausau, WI 54401.
- WANTED: A-1 specimens of any Parnassius species, nominate Speyeria nokomis ♂♀, S. nokomis ♂♀ and S. nokomis nigrocaerulea ♂♀. Would like to exchange, but will buy material. Prefer bred specimens (nokomis complex). Please send desirata list to: S.K.Dvorak, 4323 Oxford St., La Mesa, CA 92041.
- FOR SALE: Collection of world lepidoptera. All specimens A1 Quality or with very minor damage. Collection housed in two Cornell Insect Cabinets. All major families represented. Many rare species included. Insured value \$15,000.00. Will sell for half of insured value. List of species, quality and numbers will be sent to those interested. Contact Richard Edwin Howard, Dept. of Biological Sciences, Amarillo College, Amarillo, TX 79178 USA.
- WANTED: Winter pupae of many over-wintering species, but in particular: cecropia, promethea advena, asterias, troilus and glaucus. Any quantity. Please quote price and numbers available. Robert Goodden, Worldwide Butterflies & Lullingstone Silk Farm, Sherborne, Dorset, England.
- WANTED: Collection of USA papered Lepidoptera in perfect condition, approx. 80-100 individuals representing major families, for important world exhibition. Please write Robert Goodden, Worldwide Butterflies, Sherborne, Dorset, England.
- WANTED: To Buy Middle & South American butterflies, especially Morphos. Also, want to sell Japanese butterflies. M. Asakawa, P.O. Box 14, Komatsushima, Tokushima 773, Japan.
- FOR SALE: Ornithoptera alexandrae ♀ ex pup., Forewing length 125 mm. both Hindwings with small repairs, almost invisible from top view; O. priamus priamus ♀ ex pup. against highest offer. Henry Hensel, 145 Bellevue Str., Edmundston, N.B. CANADA E3v2E2.
- FOR SALE: One extreme aberration of Ornithoptera p. euphorion ♂. Underside almost all gold. Above: large amount of gold on FW with green & gold HW. Once in a lifetime offer. If interested please cable Queensland Butterfly Co. Long Road, Mt. Tambourine, Queensland, 4272, Australia.
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- WANTED: Correspondence with collectors who would like to exchange American butterflies for French Butterflies. I would be interested in all species, even the most common, as I have no American butterflies at present. Mr. Rentien, 72 rue de la Croix Verte, 49400 Saumur, FRANCE.
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