



NEWS

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The 1972 Field Season Summary



Introduce some young people to Lepidoptera this year.

Once again we present a summary of collections, observations, and rearing work done during the 1972 season. I wish to thank the zone coordinators for a splendid job this time; the editing was a breeze. And to those who contributed, many thanks to you all. I hope those of you who did not participate in 1972 will consider sending at least a few sentences to your zone coordinator this coming winter, especially with information you feel is most important and useful.

I will not try to "summarize the summaries," except to say that the climatic conditions seem to have varied from one general area to the next, and that, while some areas suffered retardation or stifling of normal populations, collecting was generally fairly good. A number of new state or provincial records are included, so be on the lookout for these.

Finally, Langston reports for an area not included in the past: Hawaii. *Papilio xuthus*, known previously from Guam and other islands in the western Pacific, was common on both Oahu and Kauai in October. J. A. Scott reported this, and pointed out that the species was introduced into Hawaii in the past few years.

Already an early spring has come to Kentucky, and your editor has not yet swung a net or capped a cyanide jar at lights in '73. I want to wish you a fruitful and enjoyable year doing your thing with Lepidoptera, whether it be collecting, rearing, or just observing the objects of our common interest.

— C. V. Covell, Jr.

ZONE 1: ARIZONA, NEVADA, CALIFORNIA. Coordinator: R. L. Langston (L). Contributors: G. Balogh (Ba), J. Brock (Br), J. M. Cadiou [France] (C), T. E. Dimock (D), S. L. Ellis (El), J. F. Emmel (Em), C. D. Ferris (Fe), G. S. Forbes (Fo), R. C. Gardner (G), C. Henne (Hn), P. J. Herlan (Hr), R. Imig (I), J. F. Leser (Le), S. O. Mattoon (Ma), J. R. Mori (Mo), J. A. Scott (Sc), C. A. Sekerman (Se), A. M. Shapiro (Sp), O. Shields (Sh), M. J. Smith (Sm), D. H. Sorg (So), W. L. Swisher (Sw), F. T. Thorne (Th), M. Toliver (To), P. Tuskes (Tu), B. Walsh (Wa) and R. E. Wells (We).

COUNTY, STATE (in caps.) = New records for county and/or state.

EAST, WEST, etc. = Easterly, westerly, etc. range extensions.

Common, abundant – Stated when usually scarce at locality or rare in general.

Special note: *Nymphalis californica* was reported by many from Nev. and Calif. in small to mass flight numbers, most records are given by county and collector ONLY. Contact individual contributors or (L) if detailed data needed.

ARIZONA: Winter and spring drought more severe than usual. Conditions improved with heavy rains beginning in June in many parts of the state, although some felt the "rain pattern" was unfavorable. Drying conditions by late August, and heavy rains again in Oct.

MIGRATORY SPECIES: *Libytheana bachmanii*, Madera Cyn., Pima Co., 1-4 July, uncommon (Tu). Only report. (Reduced numbers in 1971, but migrations in 1970: ARIZ. Aug., Sept., CALIF., Oct., Nov.).

MOTHS: *Ceratomia sonorensis*, Pena Blanca L., Santa Cruz Co., 29 July & *Sphinx istar*, Madera Cyn., S. Cruz Co., 30 July (C, P. Hubbell). *Sphinx libocedrus*, on flowers of *Oenothera hookeri*, nr. Prescott, Yavapai Co., 11-13 Aug. (C, L. Martin). *Sphinx dollii*, Pena Blanca L., 28 July (Sm). *Paonias myops* & *Sphingicampa hubbardi*, Sycamore Cyn., 9 mi. W. of Pena Blanca L., S. Cruz Co., 27 July (Sm). *S. hubbardi* Lower Madera Cyn., Pima Co., 21-23 Aug. (Tu). *Sphingicampa montana*, *Eacles oslari* & *Citheronia splendens*, Sycamore Cyn., 27 July (Sm) and same three species at Pena Blanca, 29 July (C, P. Hubbell).

BUTTERFLIES: *Erynnis juvenalis meridianus*, 1 ♀, Hog Cyn., Peloncillo Mtns., Cochise Co., – 3.7 mi. W. of N. Mex. State Line, 22 Apr. (To). [Not recorded for Hidalgo Co. or nearby counties in N. Mex. by Burns, 1964]. *Polygonus leo arizonensis*, Wickenburg, Maricopa Co., 1 Sept., abundant (Fo) & Lower Madera Cyn., Pima Co., 2 Sept., common (Sh). *Pyrrhopyge araxes arizonae*, Miller Cyn., Huachuca Mtns., Cochise Co., 11 Aug., very common (Fo). *Papilio polyxenes asterius*, "A" Mtn. W. of Tucson, Pima Co., 19 Feb., EARLY (To) & Lower Madera Cyn., 21-23 Aug., its usual time (Tu). *Neophasia terlotii*, Upper Madera Cyn., S. Cruz Co., 1-4 July, uncommon, early brood (Tu). *Anthocaris pima*, flying early a.m. to late p.m., "A" Mtn., with *Colias cesonia*, 19 Feb., EARLY (To). *Calephelis arizonensis*, E. of Pitoikam, Baboquivari Mtns., Pima Co., 12 Aug. (Fo) [On west slope of Baboquivari, Type Loc.: Brown Cyn. on east side]. *Marpesia petreus*, 1, E. of Pitoikam, & 1, Sonoita Cr., S. Cruz Co., 12 Aug. (Fo). *Texola elada perse*, Hog Cyn., Peloncillo Mtns., 22 Apr. (To). *Poladryas a. arachne*, Bill Williams Mtn., S. of Williams, Coconino Co., 26 July (Se).

LIFE HISTORY: *Agathymus neuwoegeni* (syn. *aryxna*), 1 inst. larvae in *Agave palmeri*, vic. Kitt Peak at 5500', Pima Co., 20 Feb. (To) – one ♀ reared through, emgd. 7 Oct.

NEVADA: Spring flowering delayed in south due to little rain in early part of year. Dry conditions also, early summer in western and northeastern parts. Summer rains in scattered areas resulted in additional broods of some desert species.

Note: Approx. elevations (where important) added by (L) in round figs., when not stated by contributors.

MIGRATORY SPECIES: *Nymphalis californica*, counties: Churchill (Sc), Clark (Le), Elko (Fe, L), Lyon (Sh), Ormsby (Sh) & Pershing (L).

MOTHS: Arctiidae, *Diacrisia vagans*, 3 mi. E. of Angel Lake, Elko Co., 26 June (L). Noctuidae, *Dysocnemis oregonica*, Angel Lake, 8000', 26 June (L). Neither spectacular, but only report.

BUTTERFLIES: *Amblyscirtes eos*, Ash Creek Springs, Spring Mtns., Clark Co., 19 Mar. (Le). *Ochloides yuma*, Corn Cr., 29 June, Logandale, 10 July & Whitney Mesa, all Clark Co. (Le). *Hesperia uncas lasus*, Robinson Summit, 7600', White Pine Co., 16 June (Sc) & Crescent Peak, 6000', Clark COUNTY, 21 Sept. (Hr). *H. u. macswaini*, Corey Peak, 10,500', Mineral COUNTY & NORTHEAST, 13 July 1971 (Hr). "near macswaini," Austin Summit, 7500', Lander Co. & Pinto Summit, 7300', Eureka Co., 16 June (Sc) [Intergrades into *lasus* to east & at lower elevs.]. *Pseudocopaeodes eunus*, 1 mi. W. of Wadsworth, Washoe Co., 27 Aug. (Sh). *Polygonus leo arizonensis*, Crescent Peak, Clark COUNTY, STATE & NORTH, 21 Sept. (Hr). *Battus philenor*, Kyle Cyn., 7600', HIGH ELEV., Spring Mtns., 5 Aug. (Le). *Pieris napi macdunnoughi*, Angel Lake, 8000', 26 June (L). *Harkenclenus titus* ssp., Lamoille Cyn., Elko Co., 14 July (Fe). *Satyrium fuliginosum*, Wild Horse Res., 6500', Elko Co., 30 June (El). *Callophrys spinetorum*, Willow Cr., 13 July & Wheeler Pass, 16 July, both Spring Mtns. (Le). *C. affinis*, Snake Cr., 8000', White Pine Co., 27 June (El). [? new for Snake Range?] *C. lemberti*, Angel Lake, 8000', Elko COUNTY & EAST, 26 June (L). *Everes comyntas*, Willow Cr., Clark COUNTY, 13 & 16 July (Le). *Glaucopsyche piasus daunia*, Angel Lake, 26 June (L). *Limenitis weidemeyerii latifascia*, 3 mi. E. of Angel Lane, 26 June (L) & common, Pine Cr. area SE. of Jarbidge, Elko Co., 15 July (Fe). *Chlosyne californica*, Christmas Tree Pass, Newberry Mtns., 18 Mar. (Le) & fall brood, Crescent Peak, McCullough Range, both Clark Co., 21 Sept. (Hr). *Phyciodes pallida barnesi*, Connors Pass, 7700', White Pine Co., 17 June (Sc). [New STATE record for this name comb. (Sc), but "mylitta" & "barnesi" known for Nev.] *Poladryas minuta arachne*, Sacramento Pass, 7100', White Pine Co., 17 June (Sc). [New STATE record for this name comb., but "pola", "arachne" & "monache" known for Nev.] *Euphydryas chalcedona* ssp., Christmas Tree Pass, 18 Mar. (Le). [NOT *quino*, new ssp. (D. Bauer), Newberry Mtns., Dead Mtns., Virgin Mtns., etc. in Clark Co.] *E. anicia morandi*, Mt. Charleston, Clark Co., 1 July, common on ridge above 10,500' (Le). *E. editha* ssp., Wild Horse Res., 6500', Elko Co., 30 June, abundant (El). *Speyeria coronis snyderi*, Pine Cr. area, Elko Co., 15 July (Fe) & 1 mi. W. of Wadsworth, Washoe Co., 27 Aug., worn (Sh). *S. atlantis greyi* & *S. mormonia artonis*, Lamoille Cyn., 14 July, plus *artonis* & *Coenonympha tullia elko*, Pine Cr. area, 15 July (Fe). *C. ochracea*, Spring Mtns., scarce at lower elevs., abundant above 9000' (Le).

LIFE HISTORIES: Papilio indra, adults 19 Mar., I & II inst. larvae 28 Mar. on Lomatium parryi, Ash Creek Springs, Clark Co. (Le). Glaucopsyche piasus daunia, oviposition 27 June on Lupinus caudatus, Snake Cr., White Pine Co. (El). Chlosyne la-cinia crocale, adults, larva on Helianthus annuus, Logandale, Clark Co., 10 July (Le). Phyciodes orseis new ssp. (D. Bauer), ova 15 June nr. Glenbrook, Douglas Co., reared to adults on various species of thistle (Sc).

CALIFORNIA: Winter 1971-72 abnormally dry, with soaking rains ending by mid-Feb. Spring very early with mostly fair and warm. Except for coastal fogs, summer hot and dry, several periods of over 100° especially in Central Valley and south. Rains in autumn early and excessive — 7 to 15" in Oct.-Nov. in central & north. Severe cold late Nov. - early Dec. — unusual in lowlands and Coast Ranges. Many Eucalyptus trees frozen in Bay Area — never observed by (L) previously.

MIGRATORY SPECIES: Nymphalis californica, counties: Alameda (L), Contra Costa (L), El Dorado (Ba, L), Fresno (Mo), Kern (Br), Napa (L, Sp, Sh), Nevada (Sp), Placer (Ba), San Benito (L), San Joaquin (Mo), San Mateo (Em), Santa Clara (G, So), Santa Cruz (G), Solano (Sp), Stanislaus (Hn, L, Mo), Ventura (D) & Yolo (Sp, Sh). Danaus plexippus, Thompson Cyn., Yolo Co., 28 Apr. (Sh), worn tagged from the Toronto Study (Source: Castro Valley, Alameda Co.), plus Yosemite Valley, Mariposa Co., 29 June (Ba), usual westward migration in Bay Area, but fewer than previous, late Aug., ending 7 Oct. — just before start of heavy rains (L) & observed at nectar, Santa Barbara, 27 Dec. (L).

MOTHS: Arctonotus lucidus, Laurles Grade, 600', Carmel Valley, Monterey COUNTY, 14 Jan. (Wa), Smith Cr., W. slope Mt. Hamilton, S. Clara Co., 12 Feb. (C) & Grapevine, Kern Co., blacklight & at gas stn., 4, 10 Feb. (Hn, Sm), 16-22 Feb. (C). Saturnia mendocino, Butts Cyn., Napa Co., 31 Mar. (L). S. walterorum, Spring Valley, S. Diego Co., 30 Mar. (Tu). Coloradia pandora, nr. Laguna Lodge, Laguna Mtns., S. Diego Co., 10 Sept. (Tu). Pseudohazis eglanterina, nr. Kitchen Cr., Laguna Mtns., 10 Sept. (Tu) — rare in S. D. Co. Kodiosoma fulva (all yellow form), Butts Cyn., 30, 31 Mar. (Hn, L). Alypia mariposa, Pinnacles, San Benito Co., 18-19 Mar., very common (L). Heliothodes diminutiva, Sand Hill Rd., S. of Woodside, S. Mateo Co., 30 Apr. (So). Annaphila abdita, danistica, decia & depicta, Del Puerto Cyn., Stan. Co., 27 Feb. (Hn, L). Erebus odora, Carmichael, Sacto. Co., 9 Sept. (We) — not seen in N. Calif. for 15 yrs. (We). Synedoida edwardsi & Euclidia cuspidata, nr. New Almaden, S. Clara Co., 10 May (So). Brephos infans oregonensis, Stonybrook Cyn. N. of Niles Cyn., Alameda COUNTY, 13 Feb. common, 12 Mar. worn (L). Mesolueca gratulata, Klamath R. at Orleans, Humboldt Co., 30 Mar. (So). Caripeta angustiorata, Kyburz, El Dorado Co., 9 June (L). Melittia gloriosa, Cache Cr. 1 mi. N. of Woodland, Yolo COUNTY & NORTH, 19 July (Sp).

BUTTERFLIES: L. eufala, I 80 & State 20, 5000', Nevada COUNTY & HIGH ELEV., 31 Aug. (Sp). O. yuma, Suisun Slough, Solano COUNTY & NORTHWEST, 25 June, 23 July (Sp). H. pahaska martini, Mid Hills Cpgd., S. Bdno. Co., hilltopping, 14 Sept. (Sh). E. brizo lacustra, Lake Spaulding, 5000', Nevada COUNTY, 7 June (Sp) [Few records for Sierra, many in Coast Ranges]. P. leo arizonensis, 10 at Scissors Crossing, S. D. Co., 27 Aug. (Se & J. Dockweiler) & 3 on flats E. of Bonanza King Mine, Providence Mtns., S. Bdno. COUNTY, 14 Sept. (Sh). P. i. indra, hilltop SW. of Topaz L., Mono Co., 3 June (Sm) & summit Piute Peak, 8000', Kern Co., 3 July, way SOUTH for Sierran indra (Br). P. i. pergamus, Tecate Peak, 3890', S. Diego Co., 16 June, very LATE, after rain (Tu). P. cresphontes, larvae reported 29 Apr. & 1 Oct. 1971, Fresno COUNTY & NORTH (Mo) [from Fresno Co. Ag. Comm. Office] P. sisymbrii, Del Puerto Cyn., 27 Feb., early for North (L). P. protodice sympatric with P. occidentalis [dets. certain], Castle Peak, 7000', Nevada Co., 7 Sept. (Sp) & fresh occidentalis, Castle Peak, 23 Oct., LATE (Sp). C. alexandra edwardsii, nr. Goat Springs, White Mtns., Inyo Co., 3 Aug. (Br). Kricogonia lyside, 3 mi. E. of Calexico, Imperial Co., 15 July (K. Roever). A. cethura, most ♀♀ all white, Hobo Camp, Kern River Cyn., 26, 28 Feb. (Br), also Bodfish, 4 Mar. & summit Hooper Hill, 4400', 14 Mar., all Kern Co. (Br). A. l. lanceolata, 4 mi. W. of Spaulding's Eagle Lake, 6000', 29 May & Blue L. Cpgd., So. Warner Mtns., 12 June, both Lassen Co. (Ma). E. h. hyantis, Glacier Point, Yosemite N.P., 29 June (Ba). H. titus immaculosus, nr. Canby, 23 ♂♂ on 2 July (I) & 24 mi. S. of Tululake, Modoc Co., 3 July (Mo). S. a. auretteorum, vic. Lake Spaulding, 7 July (Sp). S. a. spadix, 1 mi. NW. of Cajon Pass, S. Bdno. Co., 21 May (Sm). I. fotis windi, Pinnacles area, Deer Cr., Tehama COUNTY, ova, larvae Apr. '71, adults emgd. Mar.-Apr. '72 (Ma). I. f. bayensis, San Bruno Mtns., 4 Mar., EARLY (Em). C. spinetorum, Black Diamond Lookout, Glenn COUNTY, 11 Mar. (We), N. of Moccasin, Tuol. Co., 25 Mar. (Mo), SW. of Topaz L. & ridge 3 mi. SE. of Walker, Mono Co., 3 June, common (Sm). C. siva, 95% without green, 2 mi. N. of Hallelujah Jct., 5000', Lassen Co., 6 June (Ma). C. s. mansfieldi, Hwy. 58, Temblor Range, Kern Co., 20 Mar. (Br, Mo). C. johnsoni, Thompson Cyn., NE. of Monticello Dam, Yolo Co., 27 Feb. (Sh), 14 Mar. to 13 June, 100++ (Hn, Sp, Sh, We & others), also nr. Coulterville, Mariposa Co., 11 Mar. (Mo, Sh) & 3 mi. NW. of Stonyford, Glenn COUNTY, 18 Mar. (We). C. lemberti, 1 mi. S. of Fredericksburg, Alpine COUNTY, 9 Apr., numerous on Eriogonum elatum (Sh, We) & Lyons Cr., 7500', El Dorado Co., 11 June (L). "Nr. lemberti", above Castle L., Siskiyou Co., 4 July (Mo). L. a. arota, Pinnacles, S. Benito Co., 30 June, very worn (Ba). L. gorgon, Saratoga Gap, S. Clara Co., mid-Apr. (So). L. editha, L. cupreus & P. glandon podarce, Big Meadows, Tulare Co., 13, 25 June (Br). H. isola, Castle Peak, 7000', Nevada COUNTY & HIGH ELEV., 20 July (Sp). L. marina, Broderick, Yolo COUNTY & NORTH, 24 July (Sp). L. argyrognomon anna, Clover Cr., Sequoia N.P., Tulare Co., 28 June (Ba). P. sonorensis, dunes 1 mi. SE. of Oso Flaco L., S. L. O. Co., 1, 9 Mar. (Sw) & Pinnacles, 18 Mar., confirms 1962 record (L). G. p. piasus, Cajon Summit, S. Bdno. Co., 22 April, many (I). L. archippus lahontani, 3 mi. N. of Bridgeport Res., Mono COUNTY, STATE & WEST, 6 Aug. (Hr). P. zephyrus, nr. Monticello Dam, Yolo COUNTY, 14 Mar. (Sp) [Rare in lowlands & Coast Range, common Sierras & Cascades]. C. malcolmi, Sonora Pass, Mono Co., 29 June (I) & W. slope Sonora Peak, 11,000', Alpine COUNTY & NORTH, 6 Aug. (Mo). P. phaon, abundant for years about Lippia lawns in coastal San Diego Co. (Th), still present at Lindo L., Lakeside, 12 July (Th). T. l. leanira, Laurles Grade, 700', Carmel Valley, Monterey COUNTY, 22 April (Wa) plus Pine Hill, 17 May & middle fork Cosumnes R., 29 May, both new colonies in Eldorado Co. (We). E. chalcona sierra, W. shore Loon L., Eldorado Co., 18 June, common (Sm). E. colon ab. ♀, Blue Lake Cpgd., Warner Mtns., 18 June (Ma). E. editha wrighti, 10 mi. E. of Temecula, Riv. Co., 18 Mar. (Sm). E. e. baroni, Anthony Peak, Mendocino Co., 2 July (We). B. epithore & S. c. coronis, Bear Cr. Rd., 4 mi. E. of Boulder Creek, S. Cruz Co., 28 May (So). S. c. coronis ♀, marshes along Suisun Slough, Solano

COUNTY, 23 Sept. (Sp) [Not usual habitat & LATE]. True, dark S. c. callippe, Monte Sereno NW. of Los Gatos; S. Clara Co., 7-10 June, around Viola pedunculata (G). S. c. comstocki, vic. Conejo Mtn., nr. Hwy. 101, Ventura Co., 15 April (D). S. c. juba, Plum Cr. Ridge, 5 mi. S. of Paynes Creek, Tehama Co., 4 June (Ma). S. egleis tehachapina, Piute Peak, Kern Co., 1, 3 July (Br). C. silvestris, Metcalf Rd. E. of Hwy. 101, S. Clara Co., June, abundant (G). O. ivallda, Tioga Pass, Mono Co., 27 July (I). O. nevadensis, Little Browns Cr., 2000', Trinity Co., 29 May, EARLY & LOW (Mo), Mill Creek Falls, Warner Mtns., Modoc Co., 27 June, total 35 (I), Harvey Cr., Lassen Co., 1 July (Mo) & Castle L., Sisk. Co., 4 July (I).

LIFE HISTORIES: Saturnia mendocino, nr. Paynes Creek, 2500', Tehama Co., ova on Arctostaphylos sp. 29 Apr., pupae in diapause at press time (Ma). Hemileuca nevadensis, Escondido, S.D. Co., larvae on Salix sp. May, adults common in Oct. (Tu). M. yuccae martini, 6 mi. W. of Cajon Jct., S. Bdno. Co., larval tents common in shoots of Yucca brevifolia, 6 Feb. (Sm). P. rudkini, E. side Providence Mtns., S. Bdno. Co., larvae, all instars abundant on Thamnosia montana, 23 Sept. (Em). C. cesonia, San Diego River 3 mi. E. of Lakeside, larvae on Amorpha fruticosa, 18 June, reared to adults, also 2 ♂♂, 1 ♀ coll. (Tu) [Rare & sporadic in S.D. Co., not taken in past 5 yrs.]. P. sennae eubule, El Cajon, 25 Dec., Christmas, oviposition on Cassia (Th). I. fotis windi, Chico Cr. above Bidwell Park, 1300', Butte Co., ova 9 Apr., larvae later on Sedilla pumila, Dudleya cymosa (both new hosts) & Sedum spathulifolium (Ma). L. xanthoides, E. base San Bruno Mtns., mature larvae at bases of Rumex pulcher, 22 Apr. (Em). B. exilis, Hanford, Kings Co., oviposition on Sesuvium sessile, 22 July (Wa). P. icarioides missionensis, mature larvae on Lupinus albifrons var. collinus, Twin Peaks (Type loc.), San Francisco, 19 Mar. (Em). E. amyntula, larvae abundant in pods of Astragalus sp., Dictionary Hill S. of Spring Valley, S.D. Co., 27 Apr. (Th). G. lygdamus behrii, ova on Lupinus variicolor, E. base San Bruno Mtns., 1 Apr. (Em), adults 1, 2 Apr. (Em, Hn, L) [New colony within a few miles of former G. xerces populations].

ZONE 2: PACIFIC NORTHWEST: BRITISH COLUMBIA, WASHINGTON, OREGON, IDAHO, MONTANA. Coordinator:

M. D. Van Buskirk. **Contributors:** Dan Carney (C), Scott Ellis (E), Clifford D. Ferris (F), D. Paul Hendricks (H), Stanley Jewett (J), M. Kimura (Ki), David McCorkle (Mc), Steve Kohler (K), F. W. Van Buskirk (FV) & M. D. Van Buskirk (MV).

BRITISH COLUMBIA: No Report.

WASHINGTON: The 1972 season was preceded by a severe winter, with a record breaking snowfall in the Cascade Mtns. March and April were cold and wet, with snow in Seattle on April 15! In contrast, May was hot and dry, with above average temperatures in the last week of the month (90° +)! After some erratic June weather, the conditions stabilized in early July, and it was relatively warm and dry into October. The alpine collecting was about ten days later than normal from the increased snow pack. Despite the weather, collecting was generally very good throughout the state.

BUTTERFLIES: CHOICE SPECIES, EXTENSIONS OF RANGE, & RELATIVE ABUNDANCE. G. piasus toxexuma was extremely abundant in four localities in Okanogan, Columbia, Walla Walla, & Klickitat Counties, May 24-26. At the Columbia Co. locality, over 60 specimens in two net swings over mud! (MV, FV, C, J). C. johnsoni nelsoni, Lake Cushman, Mason Co., May 27-30. Eight females and six males of johnsoni were taken May 30, and many more seen, but impossible to capture! (MV). B. selene, nr. Ellensburg, Kittitas Co., May 26, Aug. 4, COUNTY RECORD, (FV). C. mossii, Touchet Creek, Columbia Co., March 15, (MV, FV). L. argyrognomon atrapraetextus, S. mormonia erinna, eastern Okanogan Co., early Aug., (C, K).

All collectors noted an abrupt decline of the usually common Pieris species throughout the state, especially in the arid regions. Related genera such as Euchloe and Anthocaris were also down in numbers. O. nevadensis gigas, an even-year species, was present in good numbers in suitable localities. P. indra indra showed an increase in numbers, especially in the alpine areas.

Despite the record snowfall, the alpine collecting was excellent. A large series of Boloria astarte was taken at Slate Peak, 2 mi. N. of Harts Pass, Okanogan Co., July 29. Other interesting species seen or taken included: E. editha nr. beani, anicia hopfingeri, B. titania rainieri, P. occidentalis, O. melissa beanii, P. indra, L. cupreus snowi, & A. glandon megalos. (MV, FV, K, C). The Windy Peak area in Okanogan Co. provided excellent collecting on August 6. A beautiful series of C. nastes was taken at the summit (8300'), with other interesting species being: O. chryxus chryxus, E. vidleri epipsodea, & P. centaureae freija. P. argyrognomon ricei was incredibly abundant in the meadows just below treeline, and S. mormonia washingtonia was equally as common in the forest clearings. (MV, K, C, Mc). Collecting was good in the Olympic Mtns. in Clallam Co. — a trip on July 22 to the Eagle Point area (6200') yielded such species as P. phoebus olympianus, O. chryxus valerata, E. vidleri, E. colon perdicas, P. acmon spangleatus, and other. (MV).

MOTHS: Arctonotus lucidus, 12 miles NE of Dayton, Columbia Co., March 14-15. Quite common, with 90 males being taken in two nights. No females! (MV, FV). P. clarkiae, 6 mi. E. of Touchet, Walla Walla Co., May 26. (FV). P. occidentalis, P. myops, nr. Cheney, Spokane Co., July 31. (MV).

LIFE HISTORIES: H. nuttalli larvae on Purshia tridentata, Colockum Pass Rd., Kittitas Co., May 26 & adults in July, (FV). C. johnsoni ova and larvae on Arceuthobium tsugensis parasitic on Tsuga heterophylla, Lake Cushman area, Mason Co., June 19-26. (MV, C, Mc). Ova and larvae of C. spinetorum common on Arceuthobium campylopodum parasitic on Pinus ponderosa, nr. Leavenworth, Chelan Co., July 1, 10. (MV, FV). An interesting note is that all of the wild collected spinetorum material, regardless of age, emerged within three weeks of pupation, indicating a possible second brood. C. mossii, S. melinus (!), larvae on Sedum sp., Lake Cushman, Mason Co., June 19. (MV, Mc, C). The melinus, a male, emerged in August — certainly a peculiar foodplant!

OREGON: Jewett reports that collecting during April and May was extremely poor in the Willamette Valley area, and in the foothills and desert terrain along the Columbia River due to cold and wet weather. As in Washington, April was exceptionally cold, with frequent frosts and snow flurries.

BUTTERFLIES: Jewett found O. nevadensis gigas common at Camp Sherman on the Metolius River, Jefferson Co., June 4. He noted that P. oregonius was totally absent from its usual haunts along the Columbia River near the Dalles in Lane Co. in

May. A search for immatures was also without success. Pierids also down in numbers. F. W. Van Buskirk took L. cupreus (abundant), editha, P. shasta, E. editha remingtoni, C. palla & P. saepiolus in the vicinity of Beaver Marsh, Lake Co., June 19-21.

MOTHS: H. gallii, mating pair, Camp Sherman, Jefferson Co., June 4. H. hera & eglanterina, Lake Co., July 27-28. Approximately 265 species of macros recorded for the season at black light traps, West Linn, Clackamas Co., (All J). H. eglanterina form "denudata", Crater Lake Nat. Park, Klamath Co., June 24, (FV).

IDAHO: Only two reports, but both were quite interesting. The Ellises collected throughout the state from July into early August. Rainy weather hampered their efforts in the north, but collecting was otherwise quite good. They found the most interesting species in the Lake Pend Oreille area, the Great Basin ranges of the extreme south and west, and the high range flanking the Snake River plain on the north.

STATE RECORDS: C. meadii, L. phlaeas ssp., Meadow Creek Lake, 4 mi. W. of Gilmore, 9000', Lemhi Co., Aug. 1. N. ridingsi, Bannock Pass, 8 mi. E. of Leadore, Lemhi Co., Aug. 2. All Ellises'.

BUTTERFLIES: Here are some highlights of the Ellises' collecting: C. spinetorum, P. battoides, S. of Rock Crk., Sawtooth Nat. Forest, Cassia Co., July 1. C. alexandra abundant, C. siva (violet ventral secondaries!), S. fuliginosum, Hwy. 77, .5 mi. N. of junction with Elba-Malta Rd., 5000', Cassia Co., July 3. B. kriemhild, P. faunus, T. nevada, Hwy. 36, Cache Nat. Forest, N. end of Wasatch Range, Franklin Co., July 4. Five species of Speyeria, L. cupreus, C. sheridani, 8 Mile Canyon, S. of Soda Springs, 6500', Bear Lake Co., July 4. C. nelsoni, B. selene, C. palla, P. mystic, 8.9 mi. SW of Clarkia, 3000', Latah Co., July 12. Five sympatric Colias sp. — alexandra, interior, eurytheme, philodice & pelidne, E. editha, L. argyrognomen, L. mariposa swarming, .5 mi. S. of Farragut State Park, Lake Pend Oreille, 2100', Kootenai Co., July 14. L. archippus, 10 mi. S. of Salmon, Lemhi Co., July 31. P. shasta, Gunsight Peak, 9200', Lemhi Range, Lemhi Co., July 31. Boloria titania, Satyrium sp. (acadica-californica), S. hydaspe, atlantis, C. pelidne extremely abundant, 7.9 mi. E. of Macks Inn, 6500', Targhee Nat. Forest, Fremont Co., Aug. 3.

Ferris collected in northern and south central Idaho, and reported the following: P. eurymedon, P. indra, P. clodius alturas, C. philodice, P. napi ssp., A. sara nr. browningi, O. chryxus chryxus, C. tullia ochracea, S. atlantis viola, egleis linda, S. moromonia eurynome, S. zerene nr. platina, S. coronis snyderi, E. anicia effi, Phyciodes mylitta-pallida (identification uncertain), P. campestris, L. lorquini burrissoni, N. californica, N. milberti, P. acmon ssp., P. icarioides pembina, P. saepiolus, L. heteronea, L. rubidus, L. nivalis browni, L. editha montana, C. sheridani neoperplexa, G. piasus toxema, G. lygdamus oro, E. icelus, P. sonora uta-hensis, P. ruralis, all from Park Creek, Challis Nat. Forest, 7600', Custer Co., July 16-17. All from the same meadow & surrounding hillsides. P. phoebus xanthus, C. oetus charon, P. shasta minnehaha (5 males, 2 females), 5.6 miles SE Park Creek, Challis Nat. Forest, Custer Co., July 17. S. fuliginosum, L. melissa, 2 mi. SE of Galena Summit, Sawtooth Nat. Forest, 8100', Blaine Co., July 18. S. cybele leto, E. chalcona huelmani, C. alexandra, S. saepium okanogana, A. vialis, Stone John Rd., Kaniksu Nat. Forest, Bonner Co., July 21. S. hydaspe, S. atlantis, nr. helena, C. interior (3 males, 2 females), C. palla ssp., L. mariposa ssp., Four Corners Rd., Kaniksu Nat. Forest, Bonner Co., July 21.

MOTHS: Hemileuca hera, 2 mi. SE of Galena Summit, Sawtooth Nat. Forest, 8100', Blaine Co., July 18. (F).

MONTANA: All reports commented on the bad weather that hindered 1972 collecting. A cool and rainy summer followed a very wet spring, with snow in the alpine areas on July 19-20 (5' at Logan Pass)! Ferris reported that these periods of cold weather and snow appeared to have killed the adults of some of the alpine species.

STATE RECORD: Scott Ellis found several specimens of Colias nastes in the Glacier National Park insect collections, with the following data: Swiftcurrent Mtn., N. of Logan Pass, 8000', Aug. 22, 1963. (He did not note collector.) If valid, this will represent only the third published record for the contiguous 48 states, the other two being from the North Cascades of Washington.

BUTTERFLIES: P. nitra, O. uhleri ssp., Hoover Creek, Powell Co., June 2, (K). C. interior, O. chryxus, C. spinetorum, L. argyrognomen, West Fisher River Rd., 3000', Lincoln Co., July 17, (E). C. fotis schryveri, Pattee Canyon, Missoula Co., April, (K). Colias alexandra, C. interior, C. philodice, C. eurytheme, P. napi, rapae, H. harpalus, 3 mi. SE of DeBorgia, 3300', Mineral Co., July 23, (E). P. silenus, Miller Creek, Missoula Co., April 27, (K). L. archippus, B. epithore, S. californica, 15.9 mi. N. of Seeley Lake, 4300', Missoula Co., July 29, (E). The Ellises' also report an outbreak of Neophasia menapia in the Bitterroot Valley, causing extensive damage to Ponderosa Pines. The Forest Service was not attempting to control the outbreak.

D. Paul Hendricks collected nine common species including C. siva on the West Slope of the Bridger Mtns., 5300', Gallatin Co., in May. Jack L. Harry collected in the vicinity of Terry in Prairie Co., and listed the following species: C. gorgone, S. liparops, C. pegala, P. tharos, July 13-15; L. xanthoides, L. thoe, L. helloides, July 27; C. acastus, August 2-15; A. mormo, July 31 - Aug. 28.

Ferris collected in the western and southern parts of the state, and gave the following report: P. eurymedon, P. zelicaon, C. pelidne skinneri, C. alexandra, S. cybele leto, S. hydaspe ssp., S. zerene ssp., E. chalcona huellemanni, C. palla calydon, P. mylitta, L. lorquini burrissoni, P. faunus rusticus, C. pegala boopis, C. oetus charon, C. spinetorum, L. argyrognomon atrapraetextus, L. editha montana, L. mariposa penrosae, L. nivalis browni, S. saepium okanogana, E. icelus, O. sylvanoides ssp., H. harpalus, all from Bass Creek, Bitterroot Nat. Forest, 4000', Ravalli Co., July 24. Speyeria zerene garretti, S. moromonia eurynome, S. egleis albrighti, S. cybele leto, S. coronis snyderi, S. edwardsii, S. atlantis, S. hydaspe ssp., S. callippe gallatini, P. phoebus ssp., P. campestris, C. philodice eriphyle, C. haydenii, E. epipsodea, P. napi ssp., B. selene ssp., P. icarioides pembina, all from Big Timber Canyon, Gallatin Nat. Forest, 6500', Sweetgrass Co., July 25. P. phoebus montanulus, C. meadii meadii (albino females taken with orange phenotypes), P. occidentalis, B. titania ingens, E. callias, E. theano ethela, A. glandon ssp., L. melissa ssp., L. phlaeas ssp., P. saepiolus, H. manitoba, all from Beartooth Pass area, Custer Nat. Forest, 10,300'-10,900', Carbon Co., Aug. 4-5.

MOTHS: H. eglanterina, West Fisher River Rd., 3000', Lincoln Co., July 17. (E). Platyprepia guttata, Spokane Creek, Lolo Nat. Forest, 3700', Sanders Co., July 22, (F).

ZONE 3: ALBERTA, WYOMING, UTAH, COLORADO & NEW MEXICO. Coordinator: J. Donald Eff (DE). Contributors: J. Belicek, A. Detmar (AD), S. Ellis (SLE), C. Ferris (CDF), M. Fisher (MF), G. Forbes, J. Harry, M. Howard (MH), R. Langston, J. Legge, O. Otto, D. Parshall (DP), J. Scott (JAS), O. Shields, G. Shier, R. Stanford (RES), K. Tidwell, M. Toliver (MT) and A. Van Muelenbrouck.

Overall weather pattern indicates normal cold and snow; cool spring; cool, cloudy summer with disastrous mid-summer mountain snow; and rainy fall for the northern area. Midsection with dry, mild and windy winter, early spring followed by Apr. and May snow and freezes, cool and cloudy Continental Divide and East, dry to west. Southern areas suffered from drought. Fall beautiful and prolonged with good moisture after mid-Oct. with earlier rains in the south.

ALBERTA: Cool spring, cool cloudy summer and early fall rains. Eight inches of snow on Plateau Mt. and others in mid-July.

STATE RECORDS: Callophrys spinetorum: 4 specimens collected, 1 by Allan Legge in Kananaskis Nat. For., and 3 by John Legge on Jumping Pond Cr., west of Calgary, last week of May. First Alta. record (verified by H. K. Clench). Oakley Shields in his discussion of Callophrys (Mitoura) spinetorum and C. johnsoni and their known range, habits, variation and history (1965, Journ. Res. Lepid. 4:233, ff) lists some northern Mont. (esp. Glacier Nat. Pk.) records, so this represents a logical northward extension of range.

BUTTERFLIES: E. discoidalis in normal number, L. a. rubrofasciata common except SE corner. Papilio nitra in good numbers.

MOTHS: A. polyphemus and Halisidota maculata more numerous than in previous years. Larva on Salix in July & Aug. Prionoxystus robiniae common around Edmonton. Barathra configurata had its second consecutive outbreak, again infesting the rape fields during July and Aug.

RANGE EXTENSION: Gnophaela latipennis collected from Edmonton to Lower Post, B. C. along Alaska Hwy.

WYOMING: Winter dry and mild except NW corner where heavy snows and very cold weather occurred. Spring species appeared about 2 weeks early in eastern portion of state but snow and cold at end of April caught many species in mid-flight. Summer a little cloudy and cool, mountain snows in July, slowing emergence of many species. Autumn warm and pleasant.

STATE RECORDS: None

RANGE EXTENSIONS: Euphyes vestris; Ferris' Checklist shows 5 counties, but Langston's capture of specimens near Pine Bluffs is the first for Laramie Co.

CHOICE SPECIES & RELATIVE ABUNDANCE: Usual endemics in normal numbers. Speyeria in good numbers after two years of being "down" with S. e. macdunnoughi (CDF) especially common this year in the Wind River Mts. L. P. Grey "cleaned house" on Speyeria in the Salt River Range of Lincoln Co. S. z. garretti and a greenish S. coronis common SW of Lander (AD & DE). The Big Horn Mts. afforded poor collecting with Colias s. astraea virtually non-existent and C. p. skinneri very scarce. Some Parnassius phoebus taken in a couple of localities (AD & DE). Collecting good in the area SW of Lander with L. heteronea klotsii and rubidus sirius fresh and common, Satyrium fuliginosum fairly common as was Lycaeides argy. longinus. (AD & DE). Ferris, accompanied by D. Bowman & S. Mitchell from Colo. made the Bridger Wilderness Area hike for Boloria napaea halli but had poor weather and little success. Colias g. harroweri was reduced in numbers but Bowman took one at the TL (Clear Cr. bog) in Sublette Co. end of first week of Aug. and a few were taken in Fremont Co. in late July (CDF, DE & AD). Langston was impressed in his first Wyo. collecting by the abundance and easy capture of P. phoebus sayi and Oeneis chryxus, and the opportunity to collect Euphy. e. alebarki in the Pole Mt. Area. This area also had a virtual population explosion of Neominois ridingsii. Philotes e. ancilla was common, but rita coloradensis was scarce. Callophrys affinis in association with Eriogonum flavum (CDF). Skippers scarce except for Hesperia harpalus which Langston took as early as July 6th. Detmar and Eff explored, but were disappointed in the Sunlight Basin area on Dead Indian Rd. north of Cody. Collecting was excellent in the Beartooth Mts. of Park Co. along the Mont.-Wyo. border. Oeneis m. lucilla, taygete edwardsii, Colias meadii and the albino female fm. medi, Hesperia manitoba, Boloria eun. ursadentis and kreimhild (CDF, AD & DE) recorded. Lycaena phlaeas (CDF) and specimens of Lycaeides melissa (CDF) which may be pseudosamuelis also taken. Erebia callias very common. Preceding species above timberline (10,300'-10,900'). Erebia theonus ethela (DE & AD) very common, not only above timberline but just below as well. An unusual capture was a bilateral gynandromorph of Celestrina argiolus (CDF) at Pole Mt. in Albany Co.

MOTHS: Because of the cool and wet summer in eastern Wyo. the light-trapping was poor, both with respect to species and numbers.

UTAH: Good snow pack northern part, season early in mid-section of state and southern portion suffering from drought.

STATE RECORDS: Atrytonopsis vierecki; Polar Mesa, N. side of LaSal Mts., VI-1; Callophrys a. affinis, Panguitch-Cedar Break Rd., Markagunt Plateau, Garfield Co. VI-20, & Euphy. e. gunnisonensis, same as preceding, all by Scott Ellis. Since these species are not shown in Callaghan and Tidwell's Utah Checklist, we assume these to be new state records. Brown's Euph. e. gunnisonensis is of more recent origin and probably not known when the checklist was compiled. A. vierecki is a logical expectation but G. affinis is a sizeable extension of range.

CHOICE SPECIES & RELATIVE ABUNDANCE: Tidwell captured Speyeria callippe nr. harmonia on May 26, 3 weeks earlier than any previous record. Langston collected only one day (June 27) but noted Parn. clodius menetriesii and Phoebus sayii flying together (East Canyon, Wasatch Range, S.L. Co.). Final determination of his capture of Lycaeides melissa in the Henefer area of Summit Co. may prove this to be annetta. Ferris reports capture of 5 species of Speyeria and a number of endemics on VII-13 in Willow Canyon, Wasatch Nat. For., Tooele Co. Boloria kreimhild fairly swarmed on the north end of the Wasatch Range (SLE). Ellis collected the high altitude areas of southern Utah quite extensively in June, but because of the drought, collecting was poor, especially in the Abajo, Tushar and Pine Valley Mts. Vegetation had been adversely affected and flowers were scarce. Also suffering drought were the Henry Mts. in Garfield Co. Almost no butterflies seen below 7000 ft. and

Colias alexandra and Euphydryas anicia ssp., both usually common, were absent. Scolantides piasus abundant on Bull Cr. Pass Rd. (8000 ft). On June 19 on the east side of 1000 Lake Mt. in Wayne Co. he found what may be a new subspecies of Plebejus shasta at 8000 ft. E. e. gunnisonensis taken here and on June 25th, an unusual lowland population of Colias alexandra was found in the Sevier River drainage in Piute and Sevier counties. In early Aug. Ellis checked Leidy Pk. in the Uintah Mts. and found the tundra suffering from drought and badly overgrazed by sheep. Speyeria nokomis colonies in Duchesne and Uintah Counties were greatly decreased in specimen numbers (AD & DE).

MOTHS: Langston reports Synedroides adumbrata, East Canyon, Wasatch Range, S. L. Co. and Platyprepia guttata fm. virginalis (dark males), 5 mi. SW of Henefer, Summit Co., both on June 27th.

COLORADO: Winter, dry, mild, windy. Warm spell in Feb. & Mar. followed by snow and freezing temperatures in Apr. & May. Summer cloudy and cool on East slope and along the Divide. Western Slope dry. Beautiful fall to mid-Oct. with good snow and moisture remainder of year, augering well for '73. As a result spring species were 2 to 3 weeks early but summer species were retarded in many instances. Snows and cold on Western Slope in spring did not seem to seriously affect flights. Collecting into Nov.

It is impossible to mention all the good Colorado records received this year. Collectors were in agreement that the alpine collecting was the poorest in a long, long time, probably because of the exceedingly dry tundra conditions in 1971. It has been recognized by Colo. Lepidopterists that most of the new records for the state would come from the neglected eastern plains, and to some extent from the border areas. To illustrate, two years to the day after recording a new State record for the plains, Ray Stanford returned from military service to record another new plains species. Maurice Howard, spurred to action by a local newspaper article, spent practically his entire summer collecting the neglected and unenticing southern border areas in the Comanche Grassland of Baca Co., with some interesting results and promises of more to come.

STATE RECORDS: Euphyes bimacula, Bonny Reservoir, Yuma Co. VII-1 (RES), a westerly extension of 400 miles for this species. Later several more specimens taken in same general area VII-8 (RES & MF). Phaeostrymon alcestis, Holt and Picture Canyons, Baca Co. VI-14 & 15 (MH). Occurrence of Chinaberry trees in Colo. verified and on the above dates, M. Howard took over 3 dozen P. alcestis! Eurema nise, N/of Goodpasture, Pueblo Co., VIII-1 (JAS).

RANGE EXTENSIONS & COUNTY RECORDS: Everes comyntas recorded by J. Scott (see Journ. Lepid. Soc. Vol. 22 (3), 165) taken from May to Sept. in 5 counties on the plains and found also to fly sympatrically with E. amyntula at the plains-foothills boundary (JAS). Stinga morrisoni, Horsetooth Mt., Larimer Co. V-29 (MF), a northern extension of 50-60 miles. Callophrys sheridani, nr. Ute, Montrose Co. V-17 (SLE) and end of Grand Mesa (10,000') Mesa Co. VI-2 (SLE). Yretta rhesus, Unaweep Canyon, Mesa Co. V-13 (SLE), apparently the first Western Slope record for Colo. and a westerly extension of about 250 miles. Speyeria z. sinope, & Lyc. n. browni (both VII-16) and Lyc. editha montana VII-29, all Toll Ranch, Gilpin Co. (RES). Lye. e. montana, Lakewood, Jefferson Co. VIII-12 (Van Muelenbrouck). O. jutta reducta, N. of Rollinsville, nr. Gilpin-Boulder Co. line, VII-29 (O. Otto). Tattered condition indicates it was probably blown over the Divide from Hideaway Park. Lyc. editha montana found in recent years to be common in the NW part of the state was recorded last year from Grand Co. (DP). This year he again confirmed its occurrence in Grand Co. with 15 specimens from 3 localities in the Hideaway Park area. With it now recorded from the Eastern Slope along with the infrequent but repeated records of L. n. browni, and now S. z. sinope and O. jutta reducta, it begins to appear that the Rollins Pass area is a "gateway" to the Eastern Slope. Prevailing winds undoubtedly provide the necessary help. Junonia coenia, on the plains east of the Black Forest (common & breeding) early Sept. (JAS), St. Vrain R., 1 mi. E/of Longmont, Boulder Co. IX-10 to 17 (MF), Bonny Res., Yuma Co. VII-8 & 30 (RES & MF) & Deckers, Douglass Co. VIII-12 (RES). Apparently the mild winter did not kill off this immigrant, permitting it to get a toehold. Ancyloxypha numitor, Bonny Res., Yuma Co. VII-1, 8 & 30 (RES & MF), also two colonies in Pictures & Holt Canyons at permanent waterholes, specimens taken VI-5, 14 & 15 plus second brood on VII-30 (MH). Boloria selene, (ssp?) two new colonies of this found on the plains, east of the mountains. One is near Timnath, Larimer Co. VII-16 (MF) and the other is east of the Black Forest (JAS). These are not nebraskensis or tollandensis. Philotes rita coloradensis, range found to be greater than previously recorded with records from Washington, Lincoln, El Paso, Elbert, Kit Carson & Arapahoe counties, VII-30 to VIII-11 (RES & MF).

UNUSUAL & CHOICE SPECIES: Danaus b. strigosus, 7 mi. S/Ignacio, LaPlata Co. VIII-17 (Forbes), Bonny Res. Yuma Co. VII-8 (RES); Tecolote Cr. Las Animas Co. VII-29 (MH), Boulder, Boulder Co. by S. Montfort (a non-member) on VII-18; Battus philenor, Holt Canyon, Baca Co. (worn) VI-5 (MH); Eurema nicippe, Sandstrom Ranch, Elbert Co. VI-18 (MF), Picture Canyon V-14 & Holt Canyon VI-15, Baca Co. (MH); Eurema mexicana, Greenleaf Cr. Custer Co. (9000 ft) VI-18 & 20 (AD), Lefthand Canyon, Boulder Co. VI-10 (DE), N/Goodpasture, Pueblo Co., VIII-1 (JAS), Chautauqua Mesa, Boulder Co. VII-9 & Green Mt. W/Boulder, VII-16, 2 mi. NE of Parker, Douglas Co. (no date) (all MF). Phyciodes mylitta, Canyons WSW/Cortez, Montezuma Co., IV-1 to 3, & V-11 (MF); Adelpha bredowii, N/Goodpasture, Pueblo Co. VIII-1 (JAS); Speyeria a. byblis, Axial, Moffat Co. VII-15 (DP); Lycaena thoe, Bonny Res., Yuma Co. VII-1, 8 & 30 (RES & MF); Colias cesonia, Marshall, Boulder Co., VII-5 (JAS); Yretta rhesus, Picture Canyon & Carrizo Picnic, Baca Co., IV-22 (MH), nr. Cotopaxi, Fremont Co., V-20 & South Park, Park Co. (10,000 ft.) VI-10 (both MF); Atrytone vierecki, nr. Cotopaxi, Fremont Co. V-20 (MF); Stinga morrisoni, Raton Pass, Las Animas Co. V-3 (JAS) and Pholisora alpheus, Unaweep Canyon, Mesa Co. V-13 (SLE). Satyrium calanus f. fm. heathi, Rabbit Ears Pass, Routt Co. VIII-21 & 22 (MF). As far as I know this is the first reappearance of this rarity in many years, but Jim Scott makes the observation that the Routt Co. bug is a different subspecies. He claims 30% are heathi and the remainder are intermediate or whiter on the underside than eastern slope specimens and that the Montrose & Delta Co. S. c. falacer are also lighter . . . but that no heathi are found.

MISCELLANEOUS COMMENTS: Dave Parshall was ideally located to conduct a study of Oeneis jutta reducta this past summer. He expects to publish his findings in the Journal at a later date. Maurice Howard took many additional species of interest in Baca Co. such as Amblyscirtes aenus, eos, & oslari, Anaea andria, A. celtis (common), E. dorothea, C. siva siva, V. vir-

giniensis, *Atalopedes campestris* & *Atrytone delaware*. *A. delaware* recorded from several localities by other collectors. George Shier noted an influx of *Polygonia interrogationis* in mid-summer with fresh specimens common on Rabbit Brush in Sept. Ray Stanford noted it in his yard in Denver and it was found at Ovid in Sedgwick Co. (MF). Shier has a series of a large skipper taken in '71 which is probably *Atrytonopsis deva*. Positive identification will be made. Jack Harry took 6 fresh specimens 7 mi. SE of Tintown on June 11 of what he believed to be *Callophrys affinis*. Strongly suspect that it will turn out to be *apama homoperplexa*. Ellis saw his first *Anth. sara inghami* since 1962 on Redlands and Rogers Mesas, Delta Co. He also took 35 pupae of *Megathymus yuccae browni* there. *Oeneis oslari* was scarce in South Park (MF & DE), common in Saguache Park, Saguache Co. (SLE), and in fair numbers in Middle Park, W/Tabernash, Grand Co. (DE). *Satyrium acadica montanensis*, common S. Fk. Republican R., Yuma Co. VII-8 (MF), N & S. Fks. Republican R., Yuma Co., VII-1 & 8, Platte R., Sedgwick Co., VII-1 & 8, nr. Johnstown, Weld Co., VII-26 (RES); *E. dorothea*, Fish Cr. Trail, in Glenwood Canyon, Garfield Co., VII-15 & 18 (DP) and *Speyeria c. charlottii*, Axial, Moffat Co., VII-15 (DP).

RELATIVE ABUNDANCE: *Papilio indra minori* very scarce (DE, AD & SLE). O. Otto found *Erebria callias* swarming on Guanella Pass, Clear Cr. Co., VII-30. This phenomenon last occurred in 1962. *Lyc. xan. dione* common at Ovid, Sedgwick Co. VII-8 (MF) and nr. Ft. Lupton, Weld Co., VII-7 & 11 (DE). *Colias meadii* was thick (!) on Apishapa Pass, Spanish Pks. area of Las Animas Co., VII-29, *Satyrium liparops* common Rabbit Ears Pass, Routt Co., and *H. titus immaculosus* more common than usual VII-22, both by M. Fisher. *N. iole* fresh and common on the plains VII-30 & X-1 (RES).

GOOD COLLECTING SPOTS: According to the reports these were many, but one of the best new ones appeared to be Diamond Peak (9200'), Moffat Co., in the NW corner of the state where Jim Scott found *Euph. anicia* nr. *bernadetta*, *P. phoebus*, *Piruna pirus*, *C. affinis*, *Hesperia pahaska*, *Lyc. n. browni*, *L. editha montana*, *Satyrium fuliginosum*, *P. shasta minnehaha*, *N. ridingsii* and others.

LIFE HISTORY: *Papilio polyxenes*, *zelicaon gothica* and *indra indra*, all on *Lomatium simplex* (MF). *Atrytone arogos iowa*, females ovipositing on Big Bluestem Grass, *Andropogon gerardi*. *Euphy. anicia alena* oviposition on *Penstemon retrorsus*, E. of Olathe, Montrose Co. IV-27 and *Euphy. anicia* ssp. (?) on *Penstemon strictus*, Aspen Airport, Pitkin Co. VI-16 (SLE).

NEW MEXICO: Suffering from drought the first 6 months (a little rain in SW corner) and then way above normal rainfall the last 6 months. Collecting in the mountains generally good, but poor on the desert except for permanent water areas.

STATE RECORDS: *Erynnis juvenalis clitus*, 23 Apr., 2.1 mi. E. of Geronimo Pass, Tc1S, R21W, Sec. 18, Peloncillo Mts. Hidalgo Co. *Autochthon cellus*, Clanton Draw, Peloncillo Mts., Hidalgo Co. VII-22 (MT). *Cogia caicus moschus*, same location VII-23 (MT). Mike Toliver, the only resident collector reporting, notes that with the addition of the above records the NM list of species now stands at 242. He has included a large list of County Records, most of which follow.

COUNTY RECORDS: Otero County: *C. siva siva*, *E. comyntas*, *Erynnis tristis tatus* and *meridianus*, *E. dorothea* & *Liby. bachmanni larvata* (all IV-21 to 23), *D. plexippus*, *E. rubricata*, *Thorybes pylades*, *D. g. strigosus*, *Hesperia pahaska williamsi* & *viridis*, *Amblyscirtes exotera* & *nereus* (?) and *Adelpha brodowi* (all VII-21 to 23). Taos County: *Phyciodes picta* (V-7) and *C. oetus charon* VIII-21. Sierra Co.: *Pyrgus centaureae loki*, *P. aquilo rustica*, *Boloria t. helena*, *Parn. phoebus hermodur*, *Oeneis chryxus*, *p. brucei* & *m. lucilla* and *Speyeria m. eurynome*. *A. celtis antonio* VI-23, San Mateo Mts. The record for *Oeneis p. brucei*, WNW Las Trampas Lakes at 12,469 ft. is first *brucei* taken in N. M. since Klots took them on Santa Fe Baldy in 1935 & 1936. The *O. m. lucilla* record is the first for the Pecos Wilderness and first south of Taos County. Sandoval County: *Polygonia interrogationis* & *L. archippus* (Oct) (Univ. of N. M. Entomology Class).

CHOICE SPECIES, EXTENSIONS OF RANGE & RELATIVE ABUNDANCE: Ferris collected in Grand & Catron Counties, June 16-18. Two species were of particular interest, *Eurystrymon o. ilavia*, Burro Mts., Grant Co. VI-18 and *Calephelis nemesis*, Redrock, Grant Co. (along Gila R.) VI-18. This removes any doubts about N.M. records for this species. *Texola elada* and *Dymasia dymas* common at Redrock locality. Other interesting records by Ferris are *N. ridingsii* & *Thessalia alma*, SS Basin, *C. nycteis drusius*, Silver Cr. Gila N. F. & *C. spinetorum*, Willow Cr., Gila N. F., all Catron Co. VI-17. Forbes found *L. archippus* on the Los Pinos R. above Navajo Dam, San Juan Co. VIII-22 and reports *Anaea aidea* common at Virden, Hidalgo Co. IX-3. J. Scott took the following on Gapulin Mt. VII-21, none of which are shown in Brown's list for this Nat'l. Monument: *Oarisma edwardsii*, *Polites origenes*, *E. dorothea*, *Hyp. crysalus*, *E. mexicana*, *C. oetus*. Also taken within 8 miles of the Monument were *Polydryas arachne*, *P. picta*, *E. nicippe*, *P. tharos*, *Polygonia zephyrus* and *Epargyreusclarus*. On Raton Mesa he took *Ochlodes snowi*, *Chlo-syne nycteis*, *Ambly. vialis* and a very different *Speyeria atlantis* which was characterized by a very pale, tan underside hindwing. Toliver reports a fairly good year for *Megathymus coloradensis*, *Callophrys macfarlandi* common, plus *A. aenus* in the Sandia Mts. Priest Canyon at the south tip of the Manzano Mts. in Socorro Co. produced spring species such as *Anth. sara inghami*, *P. sisymbrii elivata*, *Megathymus coloradensis*, *Erynnis pacuvius*, *Zestusa dorus* and *Apodemia mormo* in good numbers. Sierra Blanca Pk (Elev. 12,003') was collected for the first time and was interesting since this is the southernmost area of alpine tundra, but June 24 was probably too early for alpine species. Capilla Peak in Torrance Co. again swarmed with butterflies. On June 29 a total of 25 species were taken and 2 others seen. One of Toliver's more interesting trips was a trek into the Pecos Wilderness area around Las Trampas Lakes and Truchas Peaks (VII-1 to 3). Practically everything taken was a new record for Rio Arriba Co. since the area has not been previously collected.

Shields took *Thessalia fulvia* and *T. theona* near Alma, 5600', Catron Co. on Sept. 11. — From Zone 1 Report — CVC

INTERESTING LOCALITIES: Probably the most interesting locality was the Peloncilla Mts., Hidalgo Co., extreme SW N. M. This area has produced more state records than any other in recent years.

LIFE HISTORY: Two larvae of *Lyc. melissa* swept from blossoms of *Oxytropis sericca* at Capulin Mt. N. M. and reared, emerging VI-13 & 15 (MT).

MOTHS: One new State Record . . . Eumorpha typhon, Clanton Draw, Peloncilla Mts., Hidalgo Co. VII-21 (MT). He reports several hundred moths taken here, most undetermined Noctuids. In the Sandia Mts. Catocala violenta & arizonae were common. Others taken were Automeris zephyria, Arachnis zuni, and Apantesis figurata. In Union Co. nr. Capulin Mt. Sphinx dolli coloradus was recorded and the San Mateo Mts. produced Telea polyphemus cuolea.

ZONE 4: SASKATCHEWAN, NEBRASKA, KANSAS, OKLAHOMA, and TEXAS. Coordinator: H. A. Freeman. Contributors: George Balogh, Frank D. Fee, Clifford D. Ferris, H. A. Freeman, E. A. Froemel, Jack L. Harry, Frank R. Hedges, D. Hooper, Ronald R. Hooper, Kurt Johnson, Robert L. Langston, Bill Smith, and Eldon Steele. Coverage very spotty.

GENERAL CONDITIONS: Locally very good, especially in Texas. Generally below normal throughout the area.

SASKATCHEWAN: R. Hooper reported weather conditions unfavorable except during parts of May and August. He recorded the following: Atrytonopsis hianna -Cote, Togo, Tantallon, Hazelcliffe, Round Lake, and Crooked Lake; June 1-3 (first Sask. record). Papilio machaon hudsonianus. - Duck Mountain Park; May 31 (earliest Sask. record). Erynnis brizo. - Tantallon, Hazelcliffe, and Round Lake, around Quercus macrocarpa, June 2 and 3 (first Sask. record). Papilio kahli. - Spy Hill, and Tantallon, June 2. Nathalis iole. - 1 worn specimen, Round Lake, June 3 (first Sask. record). Papilio bairdii brucei. - Claybank, July 19. Erynnis juvenalis. - Tantallon, Hazelcliffe, and Round Lake, among Quercus macrocarpa, June 2 and 3. Lethe eurydice transmontana. - Gainsborough, and Antler, July 21. Atrytone delaware lagus. - Round Lake, 1 specimen, July 22 (first Sask. record). Satyrium edwardsii. - Round Lake, among Quercus macrocarpa, July 22 (first Sask. record). Lycaeides argyrognomon scudderii. - Tompkins, 1 specimen, Aug. 9 (in Great Sand Hills, usually found in Canadian Zone). D. Hooper reported Nymphalis californica. - Somme, 1 specimen, August (the last Sask. record was in 1952).

NEBRASKA: E. A. Froemel reported collecting around Columbus was very poor for the entire 1972 season. Kurt Johnson reported that he found Polites coras at Chadron, Dawes Co., which is unrecorded from northwestern Nebraska. Robert L. Langston reported from 3 mi. s. of Fremont, Saunders Co., 29 June - 4 July: Butterflies. - Atrytone delaware, Pompeius verna, Satyrium liparops & S. calanus (both common), Lycaena xanthoides dione (abundant), Asterocampa celtis (numerous flying with a few A. clyton), Chlosyne gorgone carlota. Singletons at the same locality were Satyrium acadica, male, 30 June; Lycaena thoe male & Hemiargus isola, female, 4 July (most likely northern record for this species). Moths. - Same locality and dates: Sphingidae: Cressonia juglandis. Ctenuchidae: Scepsis fulvicollis. Nolidae: Celama cilicoides. Arctiidae: Euchaetias egle & Haploa lecontei form militaris. Phalaenidae: Caenurgina crassiuscula & Hypena humuli. Geometridae: Haematopis grataria, Lygris diversilineata, Eudule mendica & Nematocampa limbata. Pyralidae: Desmia funeralis. George Balogh reported: Kimball, Kimball Co., 6 July; very few butterflies observed besides, Colias eurytheme, common; Hemiargus isola, 1 worn specimen; Lycaena rubidus, common and fresh.

KANSAS: Bill Smith reported that he and his wife collected north and west of Hardtner, Barber Co., from the 15th through the 21st of June. The following 47 species were taken: Danaus plexippus, Danaus gilippus, Euptoieta claudia, Melitaea gorgone, Phyciodes tharos, Polygonia interrogationis, Cynthia cardui, Cynthia virginienis, Junonia coenia, Anaea andria, Asterocampa celtis antonia, Harkenclenus titus mopsus, Strymon melinus franki, Phaeostrymon alcestis, Callophrys gryneus castalis, Hemiargus isola, Lycaeides melissa, Plebeius acmon, Papilio polyxenes, Papilio glaucus, Colias eurytheme, Colias philodice, Colias cesonia, Nathalis iole, Pieris rapae, Pieris protodice, Pyrgus communis, Pholisora catullus, Staphylus mazans hayhurstii, Erynnis horatius, Erynnis baptisiae, Hesperia attalus, Hesperia ottoe, Atalopedes campestris, Polites origines, Polites themistocles, Atrytone arogos iowa, Euphyes vestris metacomet, Amblyscirtes eos, Amblyscirtes nysa, Melitaea fulvia, Asterocampa clyton, Libytheana bachmanii, Vanessa atalanta, Satyrium calanus falacar, Eurema nicippe, and Papilio cresphontes.

OKLAHOMA: Bill Smith reported that he and his wife collected 9 June 1 mi. s. of Norman along the Canadian River, Cleveland Co.; 10 June was spent collecting along Rt. 77, 4 mi. n. of Lexington, also in Cleveland Co., and 1 mi. w. Stratford in Garvin Co.; 11 June was spent collecting 2 mi. w. of Asher in Pottawatomie Co. The following 61 species were taken: Euptychia cymela, Danaus plexippus, D. gilippus, Euptoieta claudia, Melitaea gorgone, Phyciodes tharos, Polygonia interrogationis, Vanessa atalanta, Cynthia virginienis, Junonia coenia, Anaea andria, Cercyonis pegala texana, Asterocampa celtis celtis, Libytheana bachmanii, Atlides halesus, Calycopis cecrops, Harkenclenus titus mopsus, S. melinus franki, Satyrium calanus falacer, Feniseca tarquinius, Lycaena xanthoides dione, Hemiargus isolus, Everes comyntas, Celastrina argiolus, Papilio polyxenes, P. cresphontes, P. glaucus, P. troilus, Battus philenor, Colias eurytheme, C. philodice, Erargyreus clarus, Thorybes bathyllus, T. pylades, Pyrgus communis, Pholisora catullus, Staphylus mazanshayhurstii, Erynnis horatius, E. juvenalis, E. baptisiae, Hesperia attalus, H. ottoe, Hylephila phyleus, Atalopedes ampestris, Polites origines, P. themistocles, Wallengrenia otho, Atrytone delaware, A. arogos iowa, Euphyes vestris metacomet, Amblyscirtes belli, A. nysa, Lerodea eufala, Nastra Iherminier, and Panoquina ocola.

TEXAS: George Balogh collected at Amarillo, Potter Co., 24 June and recorded the following species: Pyrgus communis, Pieris protodice, Nathalis iole, Anaea andria, Cynthia virginienis, Chlosyne gorgone, Euptoieta claudia, and Hemiargus isola. F. D. Fee collected in the McAllen-Mission-Hidalgo area from 27 Aug. to 11 Nov., and took 110 species with nine other species sighted. Limiting weather was 100 degrees high on 4 Sept. and 52 degrees low on 8 Nov. Rainfall was below normal for period. Collecting sites referred to include (A) McAllen and (B) 4.5 mi. sse Mission. Choice captures include: E. gemma freemani (B) 8 Nov.; A. fatima venusta (A) 28 Aug.; (B) 25 Sept.; M. stelenes biplagiata (A) 16 Sept.; L. fessonia (B) 7 Sept.; M. ethusa (B) 28 Sept., 6 Nov.; H. feronia (A) 17 Oct.; A. pavon (B) 21 Sept.; H. spurina (A) 14 Sept.; S. albata sedicia (B) 18 Oct.; P. statira (A) 16 Sept.; P. philea (B) 25 Sept.; A. maerula (A) 7 Nov.; A. clorinde (A) 16 Sept.; (B) 6 Nov.; A. asander (A) 27 Sept.; P. leo (B) 25 Sept.; S. malitiosa pecta (B) 7 Sept.; S. pulverulenta (B) 5 Sept.; X. trixus (B) 8 Oct.; C. fritzgaertneri (B)

21 Sept.; C. stallingsi (A) 2 Oct.; C. zilpa (B) 21 Sept.; C. albofasciatus (A) 16 Sept., 22 Oct.; G. stigmaticus (A) 15 Sept.; T. ruptifasciatus (A) 3 Sept.; A. toxeus (A) 12, 24 Sept.; A. fulgerator azul (A) 28 Aug, 16 Sept.; P. oileus f. montivagus (A) 14 Oct. The following species were common throughout the period: E. hermes, D. gilippus, A. vanillae, C. lacinia adjutrix, A. jatrophae, A. leilia, A. andria, L. bachmanii, B. exilis, H. ceraunus, S. bazochii, M. clytie, S. columella, E. lisa, K. lyside, P. agarithe, P. sennae, P. cresphontes, P. ornythion, P. a. idaeus, C. ethlius, W. otho, H. phyleus, L. accius, H. laviana, H. macaira, P. communis, U. procne, and P. lilea.

Clifford D. Ferris collected in the Santa Ana Refuge, Hidalgo Co., 8-11 June. Collecting severely hampered by heavy rains during period. Relative abundance: (A) – 10 or more specimens seen or taken; (B) – 4-9 specimens seen or taken; (C) – 1-3 specimens seen or taken. A. thraso tamenund (A); A. celia (A); A. fulgerator azul (C); C. fritzgaertneri (C); C. minima (C); C. trebius (C); H. macaria (B); H. phyleus (C); L. accius (A); M. tyrtaeus (B); P. catullus (C); P. vibex praeceps (C); P. communis (A); P. oileus (C); P. philetas (C); S. mazans (B); S. malitiosa pecta (B); U. procne (C); W. otho curassavica (C); A. monuste (C); C. cesonia (C); E. lisa (C); E. nise nelphe (C); C. beon (B); C. perditalis (C); C. melicerta ino (C); C. goodsoni (C); H. c. zachaeina (C); H. isola alce (C); L. cassius striata (C); S. clytie (C); S. columella istapa (C); L. bachmanii larvata (B); A. aidea (C); A. fatima (C); A. clyton louisa (A); C. lacinia adjutrix (C); M. ethusa (C); P. phaon (A); P. vesta (C); E. gemma freemani (B); and E. hermes (A). Ferris reported 10 miles N. of Junction, on Hwy 83, Kimble Co., 7 June: C. auriantica, E. vestris metacomet, P. philetas, T. pylades, E. nicippe, N. iole, A. vanillae incarnata, and E. rubricata.

H. A. Freeman reported collecting in the Dallas area normal with the usual species present in fair to good numbers. In the Brownsville area June and July conditions were slightly above normal with many choice species present.

Jack L. Harry reported collecting in an area 20 miles south of Van Horn. 26 Feb., S. melinus; 6 Mar. A. mormo duryi; H. isola; 10 Mar. C. definita; 13 Mar. A. mormo duryi; 28 Mar. L. marinus; 10 Apr. M. dymas, P. vesta, B. philenor; 15 Apr. A. m. duryi; 23 Apr. P. picta, P. polyxenes; 2 May P. lavinia; 5 May P. tharos; 6 May P. picta; 16 May A. m. duryi, A. palmeri; 7 June P. cresphontes; 8-15 Nov. E. nicippe, E. mexicana, C. cardui, C. carye, A. aidea, C. philodice, C. eurytheme, C. cesonia, E. claudia, P. melissa, H. isola, B. exilis and N. iole. North edge of Davis Mountains: 12 Mar. A. halesus, C. henrici. 1 Apr. C. siva, P. multicaudata, E. rubricata. 3 June L. bredowii, E. dorothea. 11 Nov. L. bredowii, Cynthia virginienensis, E. mexicana, and B. exilis.

Frank R. Hedges reported some very interesting catches during the season, a few of which are listed: Biblis hyperia aganisa, 30 Aug., Bensen St. Park; Papilio lycophron pallas, Aug-Sept., McAllen; Strymon alea, Sept., New Braunfels; Eurema दौरa pal-mira, N. McAllen, 30 Aug.; Strymon simaethis sarita, Comal Co., Sept.; Apatura laure, Benson St. Park, 30 Aug. Rather abundant were Adelpha fessonia, Metamorpha stelenes, Euptoieta hegesia, and Eurema proterpia.

Eldon Steele collected a specimen of Limenitis bredowii eulalia in Dallas, May 15, which is the first record of this species for the Dallas area.

Finally, several members who attended the Annual Meeting at Trinity University in San Antonio June 23 - 25 enjoyed their first Texas collecting, taking many species familiar to the locals but exciting to visitors.

ZONE 5: EASTERN-MIDWEST: MISSOURI, KENTUCKY, WEST VIRGINIA, OHIO, INDIANA, ILLINOIS, IOWA, MINNESOTA, WISCONSIN, MICHIGAN, and ONTARIO. Coordinator: M. C. Nielsen. Contributors: G. Balogh (B), G. Belyea (GB), R. Borth (RB), R. Bracher, P. Conway (PC), C. V. Covell, Jr., L. Ferge (LF), Richard Fleming (RF), Q. Hess, K. Johnson (KJ), R. Kuehn (RK), I. Leeuw (IL), L. Martin, Wayne Miller (WM), M. C. Nielsen (MCN), D. Oosting (DO), D. Parshall, J. Reimer, J. C. E. Riotte, N. Seaborg (NS), E. Shull, W. Sieker (WS), T. Stelnicki.

GENERAL: Few more reported this season than last; however, again some states were NOT heard from or were poorly represented! Weather played an important role in the success of many collectors in the region. It appears that the collecting season was generally poor as wet, cool weather was reported from many sections, and with it, late seasons and poor results! T. lineola was again common throughout the region and appears to have established new colonies in many favorite collecting areas. Only one brief report of migrating D. plexippus, although it enjoyed a good year in the region. While P. protodice was reported from Illinois, the species continues to be absent in much of the region. Many reports did not make comparisons with previous seasons nor did they indicate significant records or range extensions. Some report of the ravages of continued development of highways and general land-clearing, and use of harmful sprays on the lepidopteral fauna and their life-sustaining flora. Unfortunately, there is still a significant lack of reporting on the moth fauna of the region; it is hoped that with the appearance of the Moths of America fascicles, we may all take a new interest in this fascinating group!

MISSOURI: Balogh, the only one reporting, found A. campestris, E. lisa, H. titus, L. phlaeas americana, E. comyntas, J. coenia and P. tharos common on 23 June, Springfield, Greene Co.

KENTUCKY: Covell found spring beginning around 11 Mar. in the Louisville area, but cool, wet weather made spring collecting generally sparse and spotty. Vanessa atalanta was, however, extremely common, especially the second half of Apr. Summer seemed normal, but rather wet as in the past two years. Papilio troilus seemed more common than ever noted in 8 years in Ky. July 11 - 14 in eastern Ky. mountains was poor for butterflies, as state butterfly survey was continued to embrace 94 of the 120 counties. Fall lingered long, with only one light frost in mid-October, but little collecting was done; Nov. warm.

The Kentucky Lepidoptera survey saw the addition of many species of moths, and stood at around 1,230 species at the end of 1972. Many collectors have continued to contribute to it. Good butterfly catches in 1972 included (by Covell unless otherwise noted): Glaucopsyche lygdamus, Carter Co., Apr. 30; C. niphon, Carter Co., Apr. 30 (Charles Covell, III); H. titus mop-sus, S. calanus falacer, and S. edwardsii, Oldham Co., June 19; C. borealis, Oldham Co., June 30, and Leslie Co., July 11; F. tarquinius, Knott Co., July 13; P. sennae eubule, 2 fresh specimens in Louisville, Sept. 2 and 9 (C. Covell, III); L. bachmanii, Louisville, Sept. 8, (C. Covell, III).

WEST VIRGINIA: Not reported.

OHIO: A late season and excessive rainfall (8 in. in Apr.-May) throughout much of the collecting season dulled the success of the few reporting. Parshall, despite the poor weather, sent in another fine report with many new county records and reports of scarce or notable species. A. cellus appears locally established in Vinton Co., 12 June (3rd year reported); P. centaureae wyandot, one on 27 April, Vinton Co. (colony may be suffering from forest mgt.); T. lineola, common in several localities; E. laeta, not seen this year; C. cecrops more common in Vinton Co.; E. phaeton numerous in Vinton Co., 7-11 June; A. andria new Vinton Co. record, 17 Apr. Parshall enjoyed good early spring collecting with Elfins about normal; C. henrici new Ross Co. record, 18 Apr.; A. midea new Athens and Ross Co. records, 17 Apr. - 5 May.

Martin, reported collecting only 47 butterfly species, found the season about 3 weeks late in Apr.-May, 2 weeks late in June-Aug. in the Wellington area. Killing frost on 11 June spoiled plans for collecting butterflies on Asclepias and Apocynum flowers. D. plexippus was observed making a lengthy migration from NE to SW on 26 Sept. to mid-Oct., peaking 3-4 Oct. A large concentration of plexippus was also reported from Ashland Co. in a tree on the eve of 4 Oct. Hesperidae were mixed in abundance-marsh species were near normal while upland species were markedly reduced; Papilionidae were down with exception of G. marcellus which was moderately reduced; Pieridae were down, esp. P. rapae reduced from parasites and wet weather; Lycaenidae were sharply down, some species absent; Nymphalidae in general were down, except for N. milberti, S. idalia and E. phaeton which were common; Satyridae were also down in numbers. Martin's small colony of E. dukesi continues to flourish; several taken on 15 July.

A brief report was filed by Stelnicki from Lucas Co. in the northern part of the state. He reported P. glaucus common in wooded areas: L. p. americana exceptionally common; S. edwardsii and liparops strigosa taken for the first time; L. melissa samuelis in large numbers in July; N. milberti and A. celtis collected for the first time; H. lineata very common in July during the day; Syntomidae, esp. S. fulvicollis absent.

INDIANA: Generally, wet weather from July to the end of the season dampened much of the reporting and observations. Bracher experienced a poor year in Granger due to the weather and to some extent to the use of herbicides and pesticides, and continued "bulldozing" activities in favorite areas. He found P. p. asterius, cresphontes, G. marcellus absent and troilus holding its own in stands of roadside sassafras that have not been destroyed by herbicides; glaucus appeared in numbers in the spring, but were scarce in the summer brood. D. plexippus, V. cardui and atalanta managed to show despite destruction of habitat.

Shull collected E. baptisiae, 18 May, Kosciusko Co., second state record; however, many of the common skippers were absent; P. cresphontes very common, 27 May-mid-June. L. archippus and B. selene myrina, 29 May, Mongo, Lagrange Co. - new early dates; A. celtis, 10 Sept. Manchester, Wabash Co. - new late date.

Conway and Seaborg, collecting for the first time in the Willow Slough State Fish and Game Area, Newton Co., 17 June-17 July, found good collecting and reported these choice - unusual species: S. liparops strigosa (scarce), calanus falacer (common) on 24 June; S. acadica (common), 2 July; E. ontario, two fresh, 24 June; H. isola, one fresh, 24 June; S. aphrodite alcestis very common on all trips.

Reimer, reporting an excellent season, found butterflies more numerous than ever before in the Griffith area, Lake Co. G. lygdamus couperi, 11-15 May and L. melissa samuelis, 5 June, in numbers in the same habitat; B. selene myrina, 26 May, and bellona toddi, 6 July, common in the same habitat; C. nycteis, 4 July, common; S. idalia, abundant during July. Other interesting species included P. viator, 8 Aug., E. martialis, 16 May and E. lisa, 9 Aug.

ILLINOIS: Only Conway and Leeuw reported. Very late season in northern half of state; entire season characterized by cool, very wet weather. By mid-July emergence of species normal and many had good flights and were more abundant than usual.

CHOICE & UNUSUAL SPECIES & RELATIVE ABUNDANCE: E. dion, 16 July (numerous), McHenry Co. (PC, IL), and 17-22 July, Grundy Co. (PC), new county record; E. bimacula, 2-4 July, Iroquois and Grundy Co. (common) (PC); P. massasoit, 2-17 July (common), Iroquois Co. (PC); P. viator, 17-22 July, Grundy Co. (PC), and 16 July (common), McHenry Co. (PC, IL); Problema byssus, 8 July (abundant), Mercer Co. (PC); P. mystic, 16 July, McHenry Co. (PC), and 4 July, Grundy Co. (PC); H. leonardus, 9 Sept. (uncommon), Cook Co. (PC); C. cesonia, mid-Aug. (scarce), Lake Co. (IL); E. olympia, early May (scarce), Lake Co. (IL); C. polios, early May (scarce), Lake Co. (IL); L. helloides, late July (abundant), McHenry Co. (IL); L. thoe, late June (abundant), Lake Co. (IL); E. isola, 8 July (excessively abundant), Mercer Co. (PC); S. aphrodite alcestis, early July-mid Aug. (abundant), Cook and Iroquois Co. (IL), and idalia, (abundant), Iroquois Co. (IL); L. anthedon, scarce, Cook Co. and eurydice, 19 Aug., Lake Co.- late brood (IL); appalachia, one, 19 Aug., Lake Co. (PC); C. pegala olympus, late July - mid-Aug. (common), Lake Co. (IL).

STATE RECORD: L. eurydice fumosa, 4-22 July (common), Goose Lake Prairie State Park, Grundy Co. (tentatively det. by A. M. Sharp), (PC).

NEW INTERESTING COLLECTING AREAS: Goose Lake Prairie State Park, Grundy Co. is one of the best collecting areas in northern Illinois. It contains a large tract of virgin prairie; however, collecting is strictly limited as a state research permit must be obtained from the Conservation Dept. (heavily patrolled). Many of the above species were collected here.

Iroquois County Conservation Area, Beaverville, Twp., Iroquois Co. is an excellent collecting location for most marsh species (see above species). The area contains a large marsh interspersed with patches of woods, offering a variety of habitat.

IOWA: Balogh collected briefly north of Council Bluffs, Pottawattami Co., on 7 July and found P. catullus, E. comyntas, N. antiopa and S. cybele common, and picked up specimens of A. delaware, L. xanthoides dione and C. gorgone.

Leeuw reported L. eurydice fumosa and L. xanthoides dione common and fresh on 24 June, Johnson Co.

MINNESOTA: Not reported.

WISCONSIN: Seven reports were received — the best for the region! Generally, good collecting was reported from several localities despite the poor weather. Sieker, spending more time collecting butterflies this season, reported on several interesting species from his farm in Iowa Co.; he found Saturniids scarce this year except C. promethea, common in the Madison area. Borth reported a good year for H. titus, S. calanus falacer and Cynthia virginiensis, but found A. campestris, H. phyleus and L. bachmanii absent this year (abundant last year) in Milwaukee Co. Ferge had another good season with butterflies in Marathon Co., but found moth collecting poor after mid-June. Catocala collecting was dismal with numbers far below normal; the primary species present were unijuga and cerogama. Kuehn enjoyed excellent weather in late May, Marinette Co. and found C. augustinus, polios, E. olympia nr. rosa, all moderately common and Erynnis species and P. glaucus canadensis common.

CHOICE & UNUSUAL SPECIES: P. viator, common, 29 July - 3 Aug. Dodge (new county record) and Ozaukee Co. (RB, RK); A. delaware, Iowa Co. (WS); A. campestris, 12-19 Aug., Milwaukee Co. (B); P. origines, Iowa Co., third record for the state (WS); H. sassacus, Marathon Co., new county record (LF); T. lineola fm. pallida, several, 15 July, Milwaukee area (RB); C. palaemon mesapano, increase in population, Stevens Point (KJ), and Door and Waushara Co. (WS); L. eufala, one, 1 Oct., Aztalan State Park, Jefferson Co. (B); C. interior, Stevens Point area - new to central Wisconsin (KJ); P. virginensis, one on 21 May, near Wausau (LF); C. muticum, 11 males, 16 July, near Eagle, Waukesha Co. (RK); L. dorcas, 2-9 July, Marathon Co. - new county record and southernmost locality in the state (LF); L. helloides, 8 Oct., Walworth Co. - late record (B); L. argyrognomon nabokovi, 11 males, 8 July, near Fence, Florence Co. - new county record (RK); C. gorgone, Washara Co. (scarce, but common in 1971) (WS); S. idalia, common, Iowa Co. (WS); B. bellona toddi, 3 Sept., Wood Co. - new county record (B); E. phaeton, common, 2 July, Allenton Marsh, Washington Co. (RB); B. eunomia dawsoni, one, 18 June, Marathon Co. - new county record (LF); C. tullia inornata, 23 June, Bayfield Co. - new county record (LF); O. chryxus strigulosa, 14 males, 1 female, 25-27 May, Marinette Co. (Griewisch reported about dozen over a ten year period in this county!) (RK); O. jutta ascerta, as common as last year, 31 May - 9 June, Marathon Co. (LF).

STATE RECORD: S. boreale, Iowa Co. (WS). Det. by H. Clench.

MOTHS: S. luscitiosa, a single at light, 19 June, Marathon Co. (LF).

MICHIGAN: The collecting season started about 2 weeks later than normal in most parts, and was plagued with cool, wet weather throughout. Michigan recorded one of its coldest years with an accumulated 1000⁺ degrees below normal! While some butterflies were either scarce or absent from favorite areas, moth collecting was good but below last year's numbers.

BUTTERFLIES – CHOICE & UNUSUAL SPECIES: E. dukesi, few, 23 July, Monroe Co. (reported for the first time here last year) (GB, MCN); H. metea, unusually abundant this year, feeding on bird's foot violet and lilac, May, Montcalm, Newaygo Co. (GB, DO, MCN); H. ottoe, scarce, 15 July, Allegan State Forest, Allegan Co. (PC); E. horatius, few, feeding on buttonbush flowers, 23 July, Monroe Co. (GB, MCN); E. baptisiae, several, one female ovipositing on wild indigo, 24 May and 23 July, Monroe Co. (GB, MCN); E. persius, several, one female ovipositing on lupine, 27 May, Montcalm, Newaygo Co. (GB, MCN); E. olympia, very common, 27 May, Allegan Co. (PC); P. philenor, one male, Grand Rapids, Kent Co. - new and northernmost county record (DO); P. cresphontes, few larvae found on prickly ash in late summer, Lenawee Co. (GB, MCN); C. irus, common in several locations, May, Allegan, Montcalm, Newaygo Co. (PC, GB, DO, MCN); C. henrici, pair, May, Montcalm Co. (DO); L. melissa samuelis, males just emerging, 27 May, Allegan Co. (PC); G. lygdamus couperi, scarce, 27 May, Allegan Co. (PC); F. tarquinius, one in oak-hickory woodlot, 23 July, Lenawee Co. (WM); P. batesii, few worn, 5 Aug., Otsego Co. (GB, MCN); A. celtis, one, 4 Sept., Lenawee Co. - late record (MCN); L. appalachia, common, 15 July - 12 Aug., Cass, Clinton, Monroe and St. Joseph Co. (GB, PC, MCN); E. mitchellii, common, fresh to worn, 15 July, Wakelee Bog, Cass Co. (NOT there on 1 July) (PC); O. chryxus strigulosa, numerous in prairie, late May, (50 fresh specimens taken in 2 hours on 20 May!), Newaygo Co. (DO).

MOTHS – CHOICE & UNUSUAL SPECIES: A. nessus, S. abbottii and D. inscriptum, numerous at dusk feeding on lilacs, 23-25 May, Ingham Co. (GB, MCN); C. angulifera, large fresh male, 30 Aug. Olivet, Eaton Co. - late record, suggesting a second brood (RF); A. luna, 1 immaculate male at UV, 1 Sept., Lenawee Co. - late record indicating second brood (MCN); A. senatoria, stigma and virginensis, various instar larvae feeding on red oaks, 10 Sept., St. Joseph Co. (GB, MCN); Orthosia alurina, several at UV, 12-18 April, Clinton Co. (GB, MCN); Brachionycha borealis, 3 males at UV, 5 May, Otsego Co. (GB, MCN); Xylena cinerita and thoracia, several at UV and bait, 5 May, Otsego Co. (GB, MCN); Phuphena u-album and Cirrhophanus triangulifer, singles at UV, 8 Sept., Three Rivers State Game Area, St. Joseph Co. (GB, MCN); C. gracilis, several at UV and bait, 28 July - 2 Aug., Bear Lake Bog (within City of Lansing), Ingham Co. (GB, MCN); C. coccinata, nebulosa and subnata, 11-12 Aug., at UV and bait, along with 17 other "Cats", St. Joseph Co. (GB, WM, MCN); C. briseis, one at UV, Lenawee Co. - new county and southern record (MCN); Epirrhanthis substriataria, few at UV and bait, 5 May, Otsego Co. (GB, MCN).

PREDATOR RECORDS: Apantesis celia female taken by jumping spider, Phidippus purpuratus (det. by R. J. Saurer), 27 May, prairie, Newaygo Co. (MCN); Orthodes oviduca taken by crab spider, Misumenops asperatus (det. by R. J. Saurer), 27 May, on lilac flower, Newaygo Co. (MCN).

ONTARIO: Hess, reporting from northern Ontario, found the collecting season started very early with a blast of hot weather (up to 95° F) during the last half of May. Cooler weather followed with a cessation of activity until the middle of June; after that, the weather warmed and insect activity picked up and continued until the end of Aug. On the whole, 1972 was an average one for insects. P. glaucus canadensis was again at a low population throughout. Good populations of B. selene atrocotalis, S. atlantis and C. interior were observed; N. j-album was again at low ebb. Moth collecting in most parts of Ontario was not too favorable. Saturniids, such as luna, polyphemus and io, were scarce at light. H. columbia females tied out in the Rushing River Park near Kenora attracted wild male columbias.

BUTTERFLIES – CHOICE & UNUSUAL SPECIES: A total of 33 species were reported by Hess from Chapleau, Geraldton, Longlac, Manitoulin Island and Timmins; however, only some of the more unique species will be cited. S. liparops fletcheri, 16 July, Geraldton; C. nippon clarki, eryphon, 22 May, Geraldton; S. cybele, 19 July, 10-20 miles south of Timmins-

northern range extension; Speyeria (melanic) aberration, 19 July, Geraldton; B. frigga, two, 4 June, Geraldton; B. freija, four, 22 May - 4 June, Geraldton; B. eunomia dawsoni, one, 25 June, Geraldton; B. titania, 28 specimens, 1-28 Aug. Geraldton-one pair in copulation on 12 Aug.; P. batesii, two, 10 June, Geraldton; O. macounii, one, 11 June, Geraldton - range extension; O. jutta, two, 24 June, Geraldton.

Riotte, submitting a brief report for the Chaffey's Locks area, found the summer too cool and wet for good collecting. Spring collecting was promising with many C. henrici, polios and niphon, along with some O. chryxus strigulosa and E. lucilius. Notable record was the reappearance of C. gryneus near Belleville. Moth collecting at lights was also poor, with the exception of four male C. promethea at lights - which had not happened since 1963!

ZONE 6: SOUTH: ARKANSAS, LOUISIANA, TENNESSEE, MISSISSIPPI, ALABAMA, FLORIDA, GEORGIA, SOUTH CAROLINA, NORTH CAROLINA, AND VIRGINIA. Coordinator: Bryant Mather. Contributors: Richard L. Price (for himself, J. Bolling Sullivan III, and Malcolm Douglas), Bill Smith, D. L. Burris, S. J. Roman, L. J. Paulissen (for himself, J. Richard Heitzman, Randy Lewis, Gerald Wallis, Mike Cartwright, Eugene Reagan, and Ed Gage), Charles T. Bryson, James R. Maudsley, Rick M. Gilmore, Gayle T. Strickland, Vernon Brou, Bryant Mather, Dale F. Schweitzer, and Charles V. Covell, Jr.

ARKANSAS: Paulissen reported that in NW Arkansas spring was early; Glaucopteryx lygdamus was out on 19 Mar., three weeks earlier than previously recorded; drought occurred from late spring into fall which later turned rather cool and very wet and extended well into Nov. Butterfly appearance was quite good, only 9 of the 115 Washington Co. species were not observed. Highest one-day count (4 hours, 3 Collectors) was 53 on 27 Aug. Most interesting Washington Co. records include: Satyrrium calanus heathi and a heathi-like Euristrymon ontario caught on the same day by Richard Heitzman and his son. Randy Lewis on 22 June took a ♂ Speyeria idalia, a new county record and the first for the state in 7 years. Later 11 females were seen or collected from various parts of the county by Gerald Wallis, Mike Cartwright, and the Paulissens. On 26 Aug. east of Alma, Crawford Co., Randy Lewis took 10 (1♂ 9♀♀) of Danaus gilippus strigosus, a new county record and the first for the state in 25 years. In Washington Co., Paulissen took Phyciodes texana on 27 Aug., the first in 5 years. Randy Lewis took one on 25 Oct. for a new Benton Co. record. A new state record was established in early Sept. by the Rev. Eugene Reagan who at Siloam Springs, Benton Co., observed Heliconius charitonius feeding at sultana (Impatiens) flowers at his home in the woods. Paulissen, in Benton Co., found Chlosyne gorgone in some numbers for the first time in NW Arkansas. The fall migration of Danaus plexippus was quite substantial. Moth appearance at lights in NW Arkansas was generally poor. Very few sphingids, except Erinnyis obscura and Catocala were seen at lights and very few of the latter were seen in the woods either. Possibly weather conditions have forced pupation to hold over until 1973. Some Proserpina juanita pupae from 1970 hatched in 1972. Single Thysania zenobia and an Erebus odora were taken, the latter in Paulissen's garage. A second Gonodonta pyrgo was taken at light. Ed Gage took Colias cesonia, Anthocaris midea, Erynnis juvenalis, and Callophrys niphon in Howard Co. At lights at Camden, Ouachita Co., he took Manduca rustica, M. jasminearum, Deidamia inscripta, Darapsa versicolor, Isoparce cupressi, Callosamia amyntor, Paratreia plebeja, Epanthera deflorata, Citheronia regalis, Eacles imperialis, Actias luna, Automeris io, and Antheraea polyphemus.

LOUISIANA: Strickland took a ♂ of Smerinthus jamaicensis at Baton Rouge on 27 JAN. Brou, collecting at Sunshine and Edgard, took several hundred geometridae which, as determined by F. H. Rindge, included the following of note: Nemoria elfa, Heterophleps triguttaria, Horisme intestinata, Eubaphe unicolor, Eudelinia herminiata, Protitame virginalis, Ectropis crepuscularia, Pimaphera sparsaria, Plagodis fervidaria, Ennomos subsignarius, Apicia packardaria, Scelolophia laevitaria.

TENNESSEE: No Reports.

MISSISSIPPI: Bryson reported: (1) 3 ♂ and 3 ♀ Megathymus yuccae pupae were taken on 11 Mar. south of Meehan Jct., Lauderdale Co. from Yucca smalliana. (2) One M. yuccae larva was taken near Columbus, Lowndes Co. on 18 Feb. (3) Poanes viator zizaniae, 1 ♂, Bluff Lake, Oktibbeha Co. 19 Aug., and 1 ♂ 9.3 mi. E. of Louisville, Winston Co., 12 Sept. (4) Well established colonies of Problema byssus were found at Cumberland, Webster Co. and E. Dorman Lk., Oktibbeha Co. (5) Pieris p. protodice was common in fall at Mississippi State University, Oktibbeha Co., but no migration was observed as had been the case in the fall of 1965 at Tupelo, Lee Co. (6) Nathalis iole was extremely common on a sandy hilltop at Miss. State Univ. (7) Euphydryas phaeton ozarkae was extremely abundant from 14 May to 13 June at Cumberland, Webster Co.; several thousand were seen.

Mather reported taking 375 specimens of 24 species of Sphingidae at Bovina, Warren Co. mostly at newly opened truckweighing stations. Most noteworthy were: Eumorpha labruscae, new state record, 1 ♂ 28 Nov.; and Sphinx franckii, 15 ♂♂ June-Aug. Other species and number taken were: Agrius cingulatus (15), Manduca sexta (15), M. quinquemaculata (1), M. rustica (14), M. jasminearum (5), Ceratomia amyntor (5), C. undulosa (11), C. catalpae (47), C. hageni (25), Paratreia plebeja (34), Lapara coniferarum (23), Smerinthus jamaicensis (21), Paonias excaecatus (20), P. myops (11), Cressonia juglandis (20), Pachysphinx modesta (2), Eumorpha pandorus (31), Sphedodina abbottii (1), Deidamia inscripta (3), Darapsa myron (27), D. pholus (3), and Xylophanes tersa (25).

ALABAMA: Bryson took 1 ♂ and 1 ♀ of Megathymus yuccae on 3 Apr. at Russellville, Franklin Co. On 29 Apr. he found larvae of Hemileuca maia on Quercus falcata at Ossa Win Tha Campground, Guntersville Lake, Marshall Co.; some of these were reared to adults.

FLORIDA: Smith collected in a wooded area at Cape Kennedy, Brevard Co., on the afternoons of 14 and 15 May and found: Calycopis cecrops abundant; Euristrymon favonius abundant, but only ♀♀ were taken; Panthiades m-album abundant; Ascia monuste common, all ♀♀ being f. phileta.

Burris, reporting from the Tampa Bay area, found temperatures mainly above average, only one day of frost; rainfall much below average as has been the trend for several years. Most species present in usual numbers except during late summer which was very dry. The State Road Dept. appears to be mowing roadsides more frequently and producing great temporary reductions in populations in the affected areas. He took Phoebis statira floridensis on 27 Jan. and 29 June; Junonia coenia zonalis in Jan.-Feb., Colias eurytheme on 14 Mar., Euptychia g. gemma 20 Mar.-15 May and 26 July; Urbanus d. dorantes on 29 Feb. and 5 Apr., and located a colony in the Tampa city limits where it was not uncommon 1 Oct. through 31 Dec., Anartia jatrophae guantanamo abundant and widespread after several years of greatly reduced numbers; Actias luna 28 Mar. (1 ♀). He also gave the following report for south Florida: Papilio aristodemus ponceanus not uncommon early May; Polygonus manueli 9 May at Key Largo; Ephyriades brunnea floridensis common on Big Pine Key, 8 May; Erebus odorata taken in bait trap on Key Largo, 9 May.

Roman reported that Callophrys henrici margaretae was scarce and local in late Feb. and early Mar. in Casselberry, Seminole Co., and in mid-Mar. at Gold Head Branch St. Pk., Clay Co.; at both localities in association with Vaccinium. At Rock Springs, Orange Co., in early May, Satyrium calanus was uncommon but up in numbers from the previous four years and Eurystrymon favonius was common rather than abundant, as usually. At Istachatta, Hernando Co., 2 May: Polites baracoa, Libytheana bachmanii, and Callophrys gryneus sweadneri - unusual for an inland locality in Florida. At Torreya St. Pk., Liberty Co., mid to late May: Satyrium calanus - common, S. l. liparops - local but not uncommon, S. kingi - local but not uncommon, H. titus mopsus - scarce, new state record; Eurystrymon ontario - locally common in association with Quercus, Feniseca tarquinius, Autochton cellus, Pompeius verna (1 ♂ - new state record), Manduca jasminearum; and Callosamia angulifera - 6 larvae. At St. Augustine, St. Johns Co., early June: Eurythra phasma (1) and Erebus odorata (1). At Daytona Beach, Volusia Co. in late Sept. - early Oct.: Euphyes berryi - not uncommon, but was abundant here in Oct. 1971 - and Hesperia meskei - scarce and local on Liatris. Big Pine Key, Monroe Co. Apr. 15-16: Strymon acis bartrami - common; Anaea aidea floralis - not common (in most years common here in April); Hesperia meskei abundant; Euphyes arpa - common; and two fresh Erebus odorata.

Rick Gilmore reported for Rock Springs: Eurystrymon favonius common in May; Lethe portlandia, Oct. Collecting under cloudy condition with intermittent rain showers at Torreya St. Pk. on 26-27 May yielded: S. kingi one ♂; E. ontario two ♀♀; S. l. liparops one; Celastrina argiolus pseudargiolus common; S. calanus one; and Euptychia cymela viola common. Anastasia Island, St. Augustine, St. Johns Co.: Callophrys gryneus sweadneri June 10; E. favonius common in May. On U. S. 1 in St. Johns Co. just north of Flagler Co.: Callosamia securifera, March, common; Platysamia cecropia, 2 ♂♂, Mar.; Eurythra phasma, May and June; Citheronia sepulchralis common; Isoparce cupressi, Mar., 4 ♂♂; Ampeloeca versicolor, one ♂, Mar.; all at lights at gas stations. Casselberry, Seminole Co.: Hesperia meskei one; A. j. guantanamo, common; Urbanus dorantes, two in Dec., Atrytone arogos, May; Callosamia securifera, Oct., one ♀. In Volusia Co.: Atrytone arpa, Oct.; Hesperia meskei, Oct.; Atrytone berryi, Sept. At Miami, Dade Co. A. j. guantanamo common Dec., U. dorantes, Dec. At Royal Palm St. Pk., Dade Co.: Urbanus dorantes Apr. At Orlando, Orange Co.: A. j. guantanamo common. (See also Maudsley's report below under Georgia).

GEORGIA: At Clayton, Rabun Co. between 10 and 15 Sept. Dave Burris took: Speyeria cybele, S. diana, Cercyonis pegala alope, Junonia coenia, Limnitis arthemis astyanax, Euptoietia claudia, Battus philenor, Libytheana bachmanii, Euptychia gemma, Everes comyntas, Eurema lisa, Phoebis sennae eubule, Colias eurytheme, Polites origenes, and Hesperia leonardus.

Maudsley, reporting for Athens, noted that Agraulis vanillae nigrior and Eurema lisa were again common after having been virtually absent in 1971; Anthocaris midea was frequent in mid-April - one ♂ was taken at wild cherry blossoms; on 14 April a slightly worn Papilio palamedes was seen. He also commented on host plants for Graphium marcellus ova and larvae he collected between late Mar. and May: Asimina parviflora - Clarke and DeKalb Co., Ga. and Columbia Co., Fla; A. speciosa - Ware Co., Ga., and Marion Co., Fla; A. pygmaea - Columbia Co., Fla.; A. speciosa x pygmaea - Ware Co., Fla.; A. longifolia - Columbia Co., Fla; A. obovata - Highlands Co., Fla.; A. reticulata - Pinellas and Martin Co., Fla.

SOUTH CAROLINA: Smith reported on collecting during the first six months at the Naval Weapons Station, Berkeley Co.: Eurema d. daira ♀ 2 Jan.; C. eurytheme f. ariadne Jan.-Mar.; hairstreaks ranging from E. ontario to E. favonius tending closer to E. ontario in May. Along Edisto Beach, Colleton Co., M. yuccae tents were common, the adults ranged from M. y. yuccae to M. y. bucholzi.

Roman collected at Mt. Pleasant, Charleston Co., on 3 and 10 June: the most common butterfly was S. kingi; S. calanus was common; S. l. liparops and E. ontario were scarce; Lethe creola was ovipositing on Arundinaria tecta.

Gilmore also reported on collecting at Mt. Pleasant on 10 June, saw hundreds of S. kingi, S. calanus common, S. l. liparops one; C. a. pseudargiolus common; Poanes yehl one; E. gemma one; all collected on blossoms of eastern chinquapin (Castanea pumila).

NORTH CAROLINA: Price reported on three counties: (1) Pisgah Nat. Forest near Dillingham, Buncombe Co.: Amblyscirtes samoset one, 27 May; Pieris virginianensis, very abundant and long season 14 Apr. - 3 June, (on 27 Apr. Price and Sullivan took 34); Phyciodes batesii - a colony was found on 26 May, the first in N.C., 4 taken at 3550', one on 27 May, and on 3 June Malcolm Douglas and Price took 6; Panhiades m-album: one on 27 May; Glauropsyche lygdamus: one on 27 Apr. (Sullivan); one on 5 May (Price). (2) Carteret Co.: E. ontario, 11 June 2 ♂♂ 2 ♀♀. (3) Brunswick Co.: Poanes viator, 3 on 15 June; Atrytone arogos, 1 on 13 June.

Smith collected with Richard Anderson on the Fort Bragg Military Reservation, Cumberland Co. on 3 and 4 June: Hesperia attalus fresh ♂ 4 June; P. m-album common; S. melinus abundant; E. ontario common; S. calanus falacer uncommon; S. liparops uncommon. Covell took a ♂ S. diana on a cultivated Buddlia at Bat Cave, Henderson Co. July 21.

Schweitzer took nearly 10,000 moths including: (a) Fontana Dam 8-12 July (mixed hardwood with pines; 1200'-1800' ft. el.) ("(S)" = apparent new southern range extension): Pyrrhia exprimens, Noctua phyllophora (S), Acronicta laetifica, A.

hammamelis, A. fragilis (S), A. radcliffei, A. innotata (S), Monodes versicolor, Oruza albocostaliata, Zale squamularis, Z. obliqua, Z. metata, Zanclognatha martha (S), Plusia purpurigera (S), 17 species of Catocala including: miranda, crataegi, and clintoni; Cepphis armataria, Diactinia atrocolorata, Lygris explanata (S), Anisota stigma (including one bilateral gynandromorph), A. senatoria, Halisidota maculata (S), Artace cribraria. (b) Black Mt. Camp, Pisgah Nat. Forest (3500 ft., hemlock, beech, birch, red oak & other hardwoods): Orthodes fufurata, Noctua phyllophora, Polia goodelli, Cepphis armataria, Pero morrisonaria (S), Hydriomena renunciata, Halisidota maculata, Cicinnus melsheimeri. (c) Mt. Mitchell and vicinity: Rheumaptera hastata (S) above 5000 ft. on 8 July with Speyeria aphrodite.

VIRGINIA: Smith reported results for mid July through Sept.: G. marcellus f. lecontei very common throughout the fall in Norfolk, Chesapeake and Virginia Beach area; a female Mitoura hesseli taken 18 July at the junction of Rt. 17 and Ballhack Rd., Chesapeake feeding on milkweed, determination checked by Stan Nicolay, a new state record; a ♀ S. kingi taken 1 mile W. of the Jct. of Rt. 190 and 194, Chesapeake, 30 July; Poanes yehl abundant in August, 98 taken one afternoon on sweet pepperbush in Chesapeake; Lephelisca virginienensis very common on the W. side of Oceana Naval Air Station, Virginia Beach, in late Sept.

Schweitzer: (a) Isle of Wight Co., (Pinus taeda & coastal plain hardwoods) 24 Aug.: Acronicta spinigera, Zale obliqua, and Datana drexelli at light; Acronicta impleta, A. retardata, and Darapsa versicolor at bait. (b) base of Massanutten Mt., Rockingham Co. (oak-hickory forest), 3 June: Prionoxystus macmurtrei, Zale metatoides (?), Semiothisa multilineata, S. aemulataria, Larvae of H. maia on white oak and larvae of Orthosia garmani (S) on post oak; 5 July: Haploa contigua, Homohadena badistriga, Plusiodonta compressipalpis.

ZONE 7: NORTHEAST: QUEBEC, MARITIME PROVINCES, NEW ENGLAND STATES, NEW YORK TO DISTRICT OF COLUMBIA. Coordinator: P. Grey. Contributors: S. Anthony, W. Boscoe, E. Brower, P. Carey, J. Cadiou, L. Clarke, G. Ehle, R. Gilmore, R. Gray, H. Hitriz, J. Holmes, W. Kiel, R. Pease, E. Peters, D. Schweitzer, R. Stanford, W. Winter.

NOTE: Several long local listings, valuable additions to our files, were submitted this year. In view of the severe pruning necessitated by our "Summary" objectives, it is urged that fuller use be made of the original manuscripts, which are freely loaned on request. Profuse weather commentaries elicited by a year of record-breaking floods and droughts may be summarized thus: another "normal" Northeastern season! L.P.G.

QUEBEC: Oeneis plentiful on Mt. Albert July 9-10. Kiel and Holmes the lucky guys. More confirmation that peak flight is of snow and becomes "warm enough." The little umbellifer in the tundra on which Kiel found the P. brevicauda egg last year he thinks may be the Hemlock Parsley (Conioselinum chinense L.). A few adult brevicauda on the Tableland were flying too fast to be netted, but Holmes snagged a male, July 12, near St. Omer on the Gaspé south shore. Another fine south shore record was established near the Campbellton bridge (roadside) by their discovery of a colony of C. tullia ssp. nr. inornata. The date of July 8 contrasts sharply with the nipisiquit at Bathurst, N.B., which fly late in the month.

NOVA SCOTIA: Peters took a number of common butterflies vic. Baddeck, July 21. His North Sidney T. lineola record is a winner.

NEWFOUNDLAND: Data from the Island have been scant in previous Summaries, therefore listings by Peters are cited in full: At Corner Brook, July 22: C. tullia macisaaci common in dry fields at sea level (specimens from higher elevations running darker); L. arthemis also common. At Hawkes Bay: Oe. jutta terraenovae, July 24 (sea level sphagnum bog, old and faded this date; only Oeneis seen on entire trip); B. selene terraenovae in wet meadows (not common); L. argyronomon aster rather common but difficult to net in flight, mostly taken resting on laurel; the C. argiolus lucia taken here July 26 were mostly worn out. From vic. Hare Mt.: L. epixanthe phaedra, July 27, in a bog at 1,800 ft. At Doyles Station some ragged P. glaucus canadensis were taken on Fireweed, July 28. A few more B. selene terraenovae were picked up in a meadow at Port-au-Basque, July 28. Best catches were at Port-au-Choix, July 26, viz: both the yellow and the albino female of C. pelidne; V. atalanta (very common on Cow Parsnip); G. lygdamus nr. couperi (a large, dark ssp.); P. tharos arctica (common); P. brevicauda reported common on Parsnip. At Grand Codroy a few moths were taken July 26: Diphthera fallax, Rhynch. gilvipennis, Noctua acadensis & Oreta irrorata. On mainland Labrador at West St. Modiste, July 25, a large colony of P. napi ssp. (nr. frigida?) flew around tall grass at the edge of a small tundra, alighting with open wings on a dwarf Parsnip.

MAINE: Brower sampled Aroostook Co. early in June and again in late Aug. Butterflies were scarce, as they were also in Hancock Co. in mid-July. Around Augusta, skippers and Speyeria were low, but Satyrium flights above normal were one bright note. The coastal collecting was reported "poor" in early Sept. Monarchs came north early, were in moderate numbers in the fall. Some good moth records were secured but light trap catches averaged low. Peters gave a scattering of Maine records, mostly common species, in his reports. Winter submitted 3 pages, mainly from Boothbay & Newagen; the latter area yielded some good Catocala on Aug. 30. Hepialus mustelinus was taken July 27, Anamorgyna elimata & badicollis in late Aug., Feralia comstocki in early June (all Newagen). Stanford took a fine batch of C. lanoraieensis at Passadumkeag over the Memorial holiday, but Peters, on June 4, could find only a few worn ones.

NEW HAMPSHIRE: Kiel's good spring captures at Groveton included Epirrhanthis substriataria (relatively common), Euthy- atira pudens (one at light, May 6) and Feralia major. An Autographa flagellum on July 16 is a choice record and the following seem noteworthy: Harr. trisignata, July 14; C. juglandis (one in June); Oncocnemis piffardi (two, Sept. 2 & 9); Conservula anodonta, Aug. 2. The St. Lawrence Tiger had a very good year, and so, unfortunately, did the Spruce Budworm (a huge flight

of adults at black light July 22). One of the large Ghost Moths (Sthenopsis sp.) came to light just at dusk, July 21. In diurnals, C. argiolus and F. tarquinius were high; C. interior and Speyeria were down.

An area north of the 2nd Conn. Lake (Coos Co.) has been discovered where Polygona gracilis & congeners can be found commonly in mid-to-late Aug. Peters cites a few N.H. records, vic. Jefferson Sept. 2, including Cat. cerogama & blandula, and Esophropteryx thyatiroides.

VERMONT: Louis & Sandi Clarke sent in a report detailing diurnals taken this summer vic. North Troy and Jay (Orleans Co.). Some productive areas were noted, the best being the "North Troy Road," near the Space Research Corp. development. Among their records, mostly of common butterflies (seven pages) it should be mentioned that they took a L. thoe and some F. tarquinius. The numerous L. astyanax and arthemis taken would indicate a blend zone for these; they also turned up a tullia ssp. R. Gray, who collected in the same area and checked the Clarke material adds his own late-date captures, Oct. 8, of Autographa basigera & falcifera. He suggests that the local Cercyonis should be noted as remarkably pure "nephele," but little varied, and that the tullia colony is a new state record. Anthony's captures of tullia in four additional counties, namely, Lamoille, Chittenden, Washington and Orange, further underline the explosive range expansion now occurring in this species. Anthony found it "abundant" in some places. The flight season is late June - early July; this subspecies seems to go as "inornata".

MASSACHUSETTS: A thick file this year. The capture by Pease of a few C. hesseli in the Wilbraham White Cedar bog just east of Springfield is a highlight (May 29). Carey has some detailed observations on diurnals of the Conn. River Valley in the Holyoke sector. He evidently has a prize concentration area for E. phaeton, also some good spots for L. arthemis-astyanax hybrids. In this region Monarchs were abundant in summer, scarcer in the fall; Cynthia virginiensis and V. atalanta high, but C. cardui not seen. A huge outbreak of Ennomos subsignarius was observed in South Hadley, mid-July. Peters listed numerous diurnals and moths taken vic. Carlisle (Middlesex Co.). He says it was another very good year for hairstreaks, and he caught his first L. "proserpina" hybrid. His C. palaemon and A. hianna, June 12-14, are an interesting "north-south" conjunction. In moths, the Cat. meskei on Aug. 11 and andromedae Aug. 8 are outstanding; his other area records should be of interest to specialists in noctuids and geometrids. The report by Winter, eight pages, is a veritable compendium for the Westwood area (Norfolk Co.). A. delaware is the best record in his short diurnal listing (taken July 22). Of moths 243 species are recorded, including 11 species of sphingids (samples: D. inscriptum, June 7; D. pholus, July 1-14), 15 Catocala (notably coccinata, July 20; similis, July 23), 123 species of other noctuids (numerous goodies: 6 Acronicta, 5 Papaipema, a couple Anamorgyna, etc.) and 51 species of Geometridae. His "first time" captures included E. nubilis, Sept. 1; A. virgo, Aug. 4; Pheosia rimosa, 1-21 Aug.; and his first female of Lyctosis unitaria, June 12. Of general interest: the Gypsy Moth was much lower in this area. He notes that the Luna Moth remains common. This is a fine list for moth buffs to borrow! Finally, Holmes made a selective report from the Rockport (Cape Ann: Essex Co.) region, noting that L. astyanax had a big year (as it evidently did quite widely). His choicest moths were: C. juglandis, July 27; P. pandorus, July 30; H. trisignata, July 28 - Aug. 22; Schinia trifascia, Aug. 3; Cat. ilia in many variants, commoner than usual, early Aug.; C. parta, Aug. 16; A. elonympha, Aug. 24; Poly. formosa, July 17; and Alypia octomaculata (daytime) July 20.

CONNECTICUT: Only one report this year, of the dark female phase P. glaucus at East Hampton, Aug. 10, taken by Hitriz.

NEW YORK: The case of the dog that didn't bark. We miss coverage formerly provided by Shapiro et al and hope also for reports next season from other weakly surveyed regions, e.g., the Maritimes and the area south of New Jersey.

NEW JERSEY: Winter has a short list of diurnals from Lakehurst, Whiting and Chatham Twp., featured by a P. m-album taken Sept. 3 at Lakehurst; also a few moths, including Hyperaeschra georgica at Summit, May 13; and Schinia arcigera at Chatham Twp., Sept. 1. Peters took E. phaeton at Branchville, large colony in wet meadows, saw hundreds of T. lineola near Newton. Stanford had fair collecting in the Ft. Dix area, including a fine catch of A. midea. Incisalia rather low, A. clyton a "first", and a T. confusis May 16 was a prize. The Indigo plant had a good year, and E. baptistiae and C. irus thrived accordingly. He took several E. martialis in Sussex Co., May 27 & June 7, and found skippers normal. M. hesseli was low; E. ontario was taken in late June. Schweitzer worked the Pine barrens in Burlington Co., and secured a northern limit State record for Cossula magnifica, July 2. Other good captures included Scopula purata, Aug. 13, a female flushed from a floating bog mat, and a male taken at light; Olene aridensis, Aug. 13 (larvae prefer Oaks, hibernated in 3rd instar but two adults forced to eclosion in Dec. Schweitzer believes this a valid species); Monodes georgii, May 5 & 11, probably a southern limit State record; Phosphila turbulenta taken in late May and common in mid-Aug. although not taken at all through '69-'71; Metaxaglaea semitaria larvae were reared on various trees and shrubs. Finally, in a bait trap run from Dec. 1 to Jan. 22, a live P. interrogationis was secured.

PENNSYLVANIA: Ehle's report on Lancaster Co. diurnals continues his long-maintained survey of population fluctuations. This season the "ups" included skippers especially, featured by T. bathyllus & pylades, A. lyciades, and the return of P. catullus. Papilios did well; C. eurytheme and philodice swarmed. In nymphalids, P. tharos was unusually high, also E. phaeton (larvae reported swarming on ash saplings in early June). L. bachmanii appeared again. Absent or very low were: P. protodice, Incisalia species, J. coenia, B. toddi, L. anthedon. Making some recovery: L. eurydice, C. pegala, S. aphrodite. One S. idalia taken after a long absence. Highlight was a worn female P. m-album, June 17, the first local record of this in over thirty years. Strangely, Ehle feels the wild weather pattern of '72 had relatively little effect on butterfly populations, whereas Schweitzer thinks it had profound and continuing influence on some of the moths, notably some of the Catocala, the promethea and especially the spring flight of Orthosia, etc. Schweitzer's notes include a new State record, of several S. cerisyi at Gold (Potter Co.), June 15; he says sphingids in general had a banner year in southeastern counties. In the Philadelphia area H. cecropia is making a spectacular (although heavily parasitized) comeback. Papaipema "dismal," Catocala erratic, some common ones not seen at all; others usually

scarce (e.g., parta, piatrix, connubialis var. pulverulenta, obscura) were taken in singletons; these data vic. Strafford (Chester Co.). Good records: Strafford: M. viatica & E. decliva Dec. 31; Gold: S. rosea, F. volubilis & many Acronicta, also a huge catch (2,000 macros) taken the single warm stormy night of June 15; Allegheny N. F.: Melanopha brucei, June 14. Monarchs were common in July-Aug.

LIFE HISTORIES: Xylotype capex: larvae on many deciduous trees (on Blueberry in lab but rejected Pitch Pine), livestock from Nottingham Barrens (Chester Co., see 1971 report). Summer diapause as pupae — odd for a cuculline noctuid. Metaxaglaea viatica also was reared on many deciduous trees, from Strafford stock. One larva of Epiglaea decliva, nearly mature in late May, was found on Apple at Strafford.

Boscoe, reporting for vic. Spinnerstown (Bucks Co.) for the second year found the larger moths manifestly scarcer (over 500 fewer specimens taken) this season. He will make available his full data if needed. Goodies secured included C. jasminearum, S. eremitus, S. abbottii, Cat. serena, flebilis, mira & cordelia. Missing were: S. chersis, H. cingulata, D. inscriptum, C. lineata, E. deflorata, Cat. subnata, parta & minuta and the Cecropia, among others. New this year: C. amyntor, A. persephone, C. unijuga & epione. Only one liparops hairstreak at light (7 last year!). He is dismayed by the severity of the Gypsy Moth outbreak in Pike Co. In one of the heart-warming unplanned meetings which occasionally happen among our fraternity, Cadiou, fresh from Paris and panting to secure a Sphinx franckii, bumped into Gilmore in Pittsburgh, who guided him to a truck stop at Eighty-Four (Washington Co.) where both franckii and C. jasminearum obligingly submitted to capture, July 14. Gilmore adds that C. angulifera also was taken here, and that a nearly perfect female specimen of Thysania zenobia was picked up nearby in McMurray, July 18.

ZONE 8: THE FAR NORTH: ALASKA AND NORTHERN CANADA. Coordinator: Kenelm W. Philip. Contributors: K. Philip and collectors for the Alaska Lepidoptera Survey.

Note regarding Alaska Lepidoptera Survey: A grant from the American Philosophical Society made possible a two-week collecting trip to Noluck Lake, at the head of the Colville River on the western North Slope. This locality lies in the foothills of the De Long Mountains (Brooks Range) near the center of one of the largest essentially uncollected areas in Alaska. Noluck Lake was visited by Neal A. Weber in 1950, and a small number of butterflies were collected (of which some are now at the National Museum of Natural History); but I know of no other collecting within a 60-mile radius, and no intensive sampling within 130 miles. The weather was almost perfect, and over 1550 specimens were collected (see below for species list) by K. Philip and C. Parker in 11 days of field time.

With additional support from the Smithsonian Institution, C. F. dos Passos, and the University of Alaska, the ALS was able to equip 170 volunteer collectors, of whom approximately 100 brought in (including the Noluck Lake material) 8700 specimens from about 175 localities in Alaska, Yukon Territory, and Northwest Territories. The report below is limited primarily to previously unreported localities, or to additions to the fauna of localities reported earlier. All collecting was carried out by ALS volunteers.

NORTHWEST TERRITORIES: Range extension: Limenitis archippus from Fort Smith.

Banks Island, 12-25 July. Species recorded: Colias hecla, C. thula, C. nastes, Agriades aquilo, Boloria improba, B. polaris, B. chariclea, Oeneis polixenes, Erebia fasciata.

The next three localities (Anderson River, Atkinson Point, Tununuk Point) run in that order SE for approximately 150 miles along the coast of the Beaufort Sea (Arctic Ocean) from just W. of Cape Bathurst to the mouth of the Mackenzie River.

Anderson River Delta and vicinity, 12-28 July. Species recorded: Colias hecla, C. gigantea, C. palaeno, C. nastes, Lycæides argyrognomon, Vacciniina optilete, Boloria napaea, B. chariclea, Coenonympha mixturata, Oeneis bore.

Atkinson Point, 13 July. Species recorded: Colias hecla, C. nastes, Boloria napaea, B. improba, Oeneis bore.

Tununuk Point, 18 July to 21 August. Species recorded: Papilio machaon, Pieris napi, Colias palaeno, Euchloe creusa, Boloria polaris, B. freija, B. chariclea, Oeneis chryxus, O. melissa, Erebia rossii, E. disa, E. fasciata, E. youngi.

Inuvik, 7 June to 9 July, 5 August. Species recorded: Papilio machaon, Pieris occidentalis, P. napi, Colias palaeno, C. sp., Lycæides argyrognomon, Vacciniina optilete, Everes amyntula, Glaucopsyche lygdamus, Celastrina argiolus, Nymphalis antiopa, Polygonia gracilis, Boloria frigga, B. freija, Coenonympha mixturata, Oeneis bore, Erebia youngi.

Norman Wells, 15 July. Species recorded: Pieris occidentalis, P. napi, Colias christina?, Lycaena dorcas, Vacciniina optilete, Limenitis arthemis, Coenonympha mixturata?

Fort Franklin, no dates given. Species recorded: Pieris occidentalis, P. napi, Euchloe creusa, Celastrina argiolus, Boloria frigga, B. freija.

Fort Smith, 27 May to 12 September. The following species were obtained, in addition to those reported last year: Erynnis persius, Pieris protodice, Colias philodice?, Euchloe ausonides, Plebejus saepiolus, Limenitis archippus, Boloria frigga, B. eunomia, Speyeria sp., Coenonympha inornata.

YUKON TERRITORY:

Kluane Lake, 17 June to 24 July. Species recorded: Papilio machaon, Pieris occidentalis, Boloria napaea, B. improba, B. freija, Oeneis polixenes, Erebia fasciata, E. theano, E. youngi.

ALASKA: Weather: Southcentral Alaska and the Seward Peninsula had another very late spring. Interior Alaska and the North Slope had late springs as well, but an exceedingly warm spell in early July provided excellent collecting conditions in mid-season. Conditions on the eastern North Slope deteriorated severely during late July, however. Several collectors reported a virtual absence of butterflies on the Kenai Peninsula all summer, despite reasonable weather in mid-summer.

RANGE EXTENSIONS: Pyrgus centaureae (the second Alaskan specimen I know of), Euchloe creusa, and Erebia mackinleyensis from the Ikiakpuk Valley, just east of the Canning River about 25 miles W. of Schrader Lake, on the eastern North Slope. E. creusa was taken as well at Happy Valley, on the Sagavanirktok River, eastern North Slope; and E. mackinleyensis turned up at the head of the Canning River, Philip Smith Mountains (Brooks Range), just N. of the continental divide. One specimen of Vanessa atalanta was taken at Auke Bay, near Juneau (I know of only one other Alaskan record - from Palmer). A moth was taken on Cathedral Mountain, McKinley Park which appears to be Parabarrovia keelei. This may be a new state record.

NEW COLLECTING LOCALITIES: Noluck Lake, accessible by bush plane from Kotzebue, is (like many tundra localities) a very lush collecting area. Of particular note was the great abundance of Agriades aquilo and Erebia rossii, and the fact that Boloria distincta was present in numbers in almost every talus and dry fellfield area collected.

Point Barrow, 1-19 July. Species recorded: Papilio machaon, Boloria frigga, B. chariclea, Pararctia subnebulosa, Gynaephora rossii, Barrovia fasciata. The total lepidopteran fauna of Barrow now stands at 8 species - 5 butterflies (Colias palaeno was recorded by Paul D. Hurd in a 1958 paper, and there is one specimen of Boloria polaris from Barrow in the NMNH) and 3 moths.

Noluck Lake, 29 June to 12 July. Species recorded: Parnassius eversmanni, Papilio machaon, Pieris occidentalis, P. napi, Colias hecla, C. thula, C. palaeno, C. nastes, Lycaena phlaeas, Lycaeides argyrognomon, Agriades aquilo, Boloria napaea, B. frigga, B. improba, B. polaris, B. freija, B. chariclea, B. distincta, Oeneis bore, O. polixenes, O. melissa, Erebia rossii, E. fasciata, E. youngi, E. dabanensis?

Sagwon, 14 June to 15 July. Additional species: Papilio machaon, Glaucopsyche lygdamus.

Kavik River, 69° 40' N, 22 June to 11 July. Species recorded: Parnassius eversmanni, Papilio machaon, Colias hecla, C. thula, C. palaeno, Vacciniina optilete, Boloria napaea, B. frigga, B. improba, B. polaris, B. freija, B. chariclea, Erebia rossii, E. disa, E. fasciata.

Head of Canning River, 6-7 July. Species recorded: Pieris napi, Colias hecla, C. thula, C. gigantea?, C. palaeno, C. nastes, Lycaeides argyrognomon, Boloria napaea, B. improba, B. freija, B. chariclea, Coenonympha mixturata, Oeneis bore, Erebia rossii, E. disa, E. mackinleyensis, E. fasciata, E. youngi.

Ikiakpuk Valley, 9-14 June. Species recorded: Pyrgus centaureae, Papilio machaon, Pieris napi, Euchloe creusa, Glaucopsyche lygdamus, Boloria freija, Oeneis melissa, Erebia rossii, E. disa, E. mackinleyensis.

The Alaskan localities above are all on the North Slope, and are tundra habitats. Elevations range from sea level (Barrow) to 3700 feet (Head of Canning River).

Wiseman, 22 May to 7 July. Additional species: Carterocephalus palaemon, Pieris occidentalis, Incisalia augustinus.

Big Lake (22 miles WNW of Wiseman), 25 May to 25 August. Species recorded: Erynnis persius, Papilio machaon, Pieris napi, Colias philodice, C. palaeno, Glaucopsyche lygdamus, Celastrina argiolus, Nymphalis antiopa, Polygonia gracilis, Phyciodes campestris, Boloria frigga, B. chariclea, Coenonympha mixturata, Oeneis bore, Erebia disa, E. fasciata, E. discoidalis, E. youngi.

Rustic Village, 30 May to 16 July. Species recorded (an asterisk indicates a tundra habitat): Papilio machaon, Pieris occidentalis, P. napi, Colias hecla*, C. philodice, C. gigantea, C. palaeno, C. nastes*, Euchloe creusa, E. ausonides, Lycaena phlaeas, Lycaeides argyrognomon, Vacciniina optilete, Agriades aquilo, Everes amyntula, Glaucopsyche lygdamus, Nymphalis antiopa, Polygonia sp., Boloria napaea*, B. frigga, B. freija, B. chariclea, B. eunomia*, Coenonympha mixturata, Oeneis bore, O. jutta, O. melissa*, O. polixenes*, Erebia rossii, E. disa, E. discoidalis.

The three preceding localities are at the south foot of the Brooks Range in NE Alaska, and are at the northern edge of the taiga. Except where indicated, the collecting was carried out in taiga habitats.

Fort Yukon, 16-22 July. Species recorded: Papilio glaucus, Pieris occidentalis, Colias philodice, Euchloe ausonides, Lycaeides argyrognomon, Limenitis arthemis, Nymphalis antiopa, Polygonia faunus, Phyciodes campestris.

Eagle Summit, Murphy Dome, Fairbanks and vicinity, 9 May to 2 August. The usual species were obtained, with the odd-year species (Hesperia manitoba, Boloria polaris, B. chariclea, B. distincta, Oeneis jutta, O. polixenes (below treeline), (Erebia disa absent).

McKinley Park, 4 June to 8 August. The usual species were found - see the 1969 Annual Summary, under the heading, "Alaska Range and Northern Foothills", for butterflies.

Denali Highway, miles 34-40, 1-9 July. Species recorded: Colias palaeno, Boloria chariclea, Coenonympha mixturata, Oeneis bore, Erebia disa.

Glennallen, 11 June to 18 August. Species recorded: Colias philodice, C. gigantea, Euchloe ausonides, Lycaena dorcas, Lycaeides argyrognomon, Plebejus saepiolus, Everes amyntula, Celastrina argiolus, Phyciodes campestris, Boloria frigga, B. freija, B. titania/chariclea, B. eunomia, Erebia discoidalis.

Kodiak Island, 10 June to 4 November. Species recorded: Pieris napi, Nymphalis milberti, Platarctia parthenos.

Hope (Kenai Peninsula), 7-27 July. Species recorded: Papilio machaon, Pieris napi, Boloria napaea, B. freija, Oeneis bore, O. melissa.

Haines, 5 June to 15 July. Species recorded: Papilio glaucus, Pieris napi, Anthocaris sara, Plebejus saepiolus, Everes amyntula, Nymphalis antiopa, N. milberti, Speyeria zerene?, Hyles gallii.

Sitka, 14 June to 10 July. Species recorded: Pieris napi.

Large samples of (undetermined) moths were obtained from the following localities: Noluck Lake, Sagwon, Arctic Village, Nome vicinity, Delta Junction, Healy, McKinley Park, Gulkana River, Glennallen, Juneau, and Sitka.

ZONE 9: THE NORTHERN NEOTROPICS. Coordinator: Eduardo C. Welling M. Contributors: J. M. Cadiou, Oakley Shields
[Note: As of this date, the usual fine report from Welling M. has not arrived. It will be published later on. The notes below were submitted by Zone 1 Coordinator Bob Langston. - Ed.]

MEXICO. Euproserpinus phaeton, was collected by Cadiou 5 miles north of Valle de Las Palmas, Baja California Norte, about 15 miles south of the U.S. border at Tecate on 20 and 23 Feb. Shields collected Polygonus leo arizonensis 10 miles east of El Salto, Durango, on 5 Sept.

ZONE 10: SOUTH AMERICA. Coordinator: Thomas C. Emmel. Contributors: Keith S. Brown.

Brown submitted an outstanding report on 1972 collecting highlights in four South American countries, including Brazil, Colombia, Ecuador, and Panama. Only a few of the details can be reported here, but copies of the full report may be obtained from the Zone Coordinator.

ECUADOR: At Santo Domingo de los Colorados (Dec. 5-6), a trail about a km. east of the Hotel Toachi provided species of ithomiines and heliconiines of special interest. Ithomia hyala, Oleria zelica and O. modesta were unusually common; several Hypocada consobrina and one Callithomia beronilla were caught. Heliconius sapho sapho, H. eleuchia primularis, and H. cydno heanschii (white; no yellow alitheia seen this year) were frequent in semi-gregarious roosts along riverbeds. Hel. atthis larva found and raised to adult on Passiflora resticulata; H. sara sprucei on P. auriculata.

At the area of Topo, halfway between Banos and Puyo at 1200-1500 m., five species of Actinote, 19 species of ithomiines, 9 species of heliconiines were present in numbers. Adelpha and Marpesia species were unusually common on wet ground. Many unusual species of riordinids were taken. Foodplants: Hel. melpomene on Passiflora menispermifolia, H. timareta on a (cultivated) P. alata.

In the montane forests in the area of Banos (also Dec.) ithomiines were exceptionally abundant, including some very little-known species. Papilio americanus was frequent on wet sand in the afternoons.

On the Puyo-Napo road (Km. 43, Dec. 9-11), Morpho achilles, menelaus, perseus (blue) and rhetenor were all present, as were many good species of ithomiines, satyrids, theclines and riordinids. At Km. 25 and Km. 43, excellent hybrid populations of Hel. erato (emma x notabilis) and melpomene (plesseni x aglaope); also, Hel. aode bartletti, H. xanthocles melittus, H. wallacei flavescens, H. numata aristiona, H. hacale quitaleña, H. timareta richardi, H. sara thamar. Foodplants found here were: H. melpomene on P. lorentensis, H. erato on P. auriculata, H. n. aristiona on P. quadriglandulosa.

COLOMBIA: Excellent collecting in December and January at several sites. Of particular general interest to lepidopterists is a comprehensive report on collecting in the Chocó area of the country, which receives some of the heaviest annual rainfall in the world (over 400 inches). Working out of Quibdó, Brown and Woodruff Benson collected many unusual species of satyrids, ithomiines, riordinids and heliconiines. The prize was Heliconius godmani, quite frequent in many areas. A new form of H. sapho was found flying in H. s. sapho populations, resembling H. cydno zelinde (which was common) in the lack of a HW white border. A mature larva found very near town (Km 0.5 of the Itzmina road) on a large vine of Passiflora (Tryplostemma) gracillima produced an adult of Hel. hecalesia exactly halfway between H. h. gynaesia (which precisely matches H. godmani's phenotype) and H. longarena, suggesting that the latter is best regarded as conspecific with hecalesia in spite of morphological differences. Also collected were H. necale melicerta, H. ismenius faunus, H. sara, H. erato venus, H. melpomene vulcanus, H. eleuchia eleusinus, and Eueides lybia olympia (abundant on roadside flowers). The Euides were using P. guazumaefolia as a host and H. erato was using P. (T.) gracillima.

At Villavicencio, J. Glassberg caught the first Philaethria wernickeis known from Colombia. Outstanding collecting was found at La Macarena, an isolated mountain range dividing the llanos from the Amazon forest in the south part of Meta Province.

BRAZIL: In Amazonian Brazil, near Manaus and Itacoatiara, butterflies in general were quite scarce; however, an unusual abundance of Hypothyris euclea barii was noted. Hybrid populations of heliconians in these areas are being sampled in a long-term program.

Collecting in Brazil in general produced a number of interesting species records during 1972. Heliconius nattereri produced another bumper crop this year in the refuge colony; a total of 33 were seen on May 20. These heliconiines are being marked and released in a study of the movement patterns and longevity of this extraordinarily rare species. In Itamarajus, South Bahia, Paulo Cesar Elias caught the first specimen of Napeogenes xanthone known since the type. Rio (Sumaré) itself was extremely poor this year, only the skippers being out in near-usual numbers. No count was made in the August flower season, but casual investigation indicated that the list would barely pass 150 species (versus 280 in 1971). An extensive breeding program with Heliconius species was successfully conducted in Rio from August to December, including the first laboratory-produced interspecific hybrid of Heliconius (H. numata superioris x H. melpomene). It was discovered that H. numata males could be hand-paired (rarely accomplished with heliconiines). A large number of species, mostly lycaenids and skippers, was added to the Planalto list on a trip with Olaf Mielke in June and July. The full lists will be published soon; the total is now well over a thousand species. A most exceptional lycaenid year was noted in the Parque do Gama (Brasília), where total day's lists in this family of 137 and 135 species were attained on June 17 and June 20, with 81 and 84 Theclae being caught, mostly in a single clearing where the morning sun hit the sand. At Sao Vicente, the first Heliconius doris in the Paraguay Basin was caught in mid-July. A full list of species in the very rich Buriti area will be published. Two new areas in western Mato Grosso were extensively collected, giving many new records for extra-Amazonian Brazil. Four days of truly exceptional collecting (daily lists of 218, 297, 309, and 311 species!) were experienced at the Upper Rio Cabacal, along a trail from Rio Vermelho to Salto do Céu (highland Amazonian-type forest). Nymphalids taken on the last three days (146, 159, and 161 species!) included a number of species new to science.

NEWS AND NOTES FROM THE EDITOR:

Any members-especially dealers-who would like to contribute a door prize for drawing at the Annual Meeting please write to the Editor.

Congratulations to the Allyn Museum of Entomology upon the dedication March 15th of their new museum building. The new address is: 3701 Bay Shore Road, Sarasota, FLA. 33580, U.S.A.

On a recent safari into the impenetrable forest of S. W. Uganda, Mr. Raymond J. Murphy had the good fortune to capture a small number of ♂ Graphium gudenusi. For the cost of airmail postage (though please do not send any money with your requests) he would be willing to send a specimen to any major museum not having one of these rare butterflies in their reference collections. He may also be able to send uncommon butterflies found in Uganda and would consider making special safaris to obtain certain species if reasonable expenses can be met. Contact him at Box 1138, Kampala, UGANDA.

WARNING: People or institutions purchasing material from Eduardo C. Welling M. should be aware that any insect material labelled as coming from X-can, Quintana Roo, secured from sources other than from him, are being fraudulantly labelled. There is no other collecting being done there or nearby; only his. The name X-can is being used so that when twentieth century pirates raid known collecting localities, they will fall onto Welling M.'s, and not that one where someone else has a collecting group going. Welling M. material is known by the type of envelopes and rubber stamp he uses, and his handwriting, so beware of other labelling.

DEALERS' DIRECTORY addition: Butterfly Magic, 1817 Wesley Ave., Janesville, WISCONSIN, 53545, U.S.A. Under Part I: Equipment and Materials: 35mm slides of butterflies, moths, and other insects.

Our correspondent in Germany, Gerhard Hesselbarth, writes that Dr. Walter Forster is presenting a talk to the Bayerischer Entomologentag in Munich, Apr. 6-8, 1973; and the program of the Entomologentagumg Wien (Vienna, Austria) Feb. 10-11, 1973, included papers by Michael Boppre ("Duftstoffe bei Schmetterlingen") and Dr. W. Dierl of Munich ("Die Isolationsmechanismen bei Schmetterlingen im Himalaya").

The nineteenth annual meeting of the Michigan Entomological Society will be held in room 244, Natural Science Bldg. at Michigan State Univ., East Lansing, on 18 May, 1973. A field trip will be held the following day. Those wishing to attend, participate, or join the Society please write: Dr. Richard C. Fleming, Dept. of Biology, Olivet College, Olivet, MICH. 49076, U.S.A.

Dr. Url Lanham, Curator of Insects, Univ. of Colorado Museum, Boulder, Colo. 80302, U.S.A., wishes to give away free several thousand duplicate, spread, but unpinned butterflies WITHOUT DATA. Good for art work, etc. Write him if you are interested - right away!

Your NEWS Editor regrets that he must relinquish the title and its responsibilities with the July, 1973, edition. As yet the replacement has not been decided upon, but hopefully that person will be named by the time of the Annual Meeting.

The May NEWS will feature articles by R. B. Dominick, Jo Brewer, and Cyril F. dos Passos. Good news items are always welcome. Help make this newsletter a success by contributing. And let the Treasurer know if you are not receiving your issues.

Have a fruitful and pleasant season! — CVC

BOOKS:

Moulds, M. S. & J. V. Peters, 1972. A Label Check List of the Australian Butterflies. 25 pp., 1 pl. Names printed in label form and may be cut out and used to name a collection. \$1.75 (U.S., postpaid). Australian Entomological Press, 14 Chisholm Street, Greenwich, N.S.W. 2065 AUSTRALIA.

AUSTRALIAN ENTOMOLOGICAL MAGAZINE. *Edited by M. S. Moulds.* First issued July, 1972, and published quarterly. Contains at least one paper on Australian butterflies and a comprehensive list of all recent literature concerning Australian insects, plus subscribers' notices, in each issue. \$6.40 (U.S.) per year; Australian Entomological Press, address above.

Munroe, E. G. 1972. The Moths of America North of Mexico, fascicles 13.1A and 13.1B: Pyraloidea: Pyralidae (part): (two text parts). 250 p. E. W. Classey Ltd. & R.B.D. Publications Inc. For subscription and non-subscription prices, write Entomological Reprint Specialists, Box 77971 Dockweiler Station, Los Angeles, CALIF. 9007, U.S.A.

SPECIAL NOTICE — BACK VOLUMES AVAILABLE (Complete)

VOL. 1 — For the first time since 1947, offered for sale to members. Printed in offset from re-typed pages in the original format and size, it is an exact duplicate of the original mimeographed volume.

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VOL. 10 & 11 — Beginning with vol. 6, format is 6"x9" letterpress printed.

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COL. S. S. NICOLAY, 1500 Wakefield Dr., Virginia Beach, VA. 23455, U.S.A.

Parts of volumes omitted from the above list are available pro rata. Some lack only one part. Reprinting of missing numbers is continuing, but is time-consuming and costly. We anticipate volumes 2 and 3 should be available early in 1973. For additional information, contact: SIDNEY A. HESSEL, Nettleton Hollow Road, Washington, CONN. 06793, U.S.A.

25th ANNIVERSARY COMMEMORATIVE ISSUE

STATUS OF FUNDS. We are now near 70% of our financial goal. This represents contributions from about 18% of the membership. If only 25% of the members will contribute \$5 or more, the goal will be reached and the volume can go to press. Contributors of \$20 or more will receive the volume without further charge. It is believed most members will find the Consolidated Index alone worth \$20. This is an alphabetical index of authors, subjects, and species for the first 25 volumes of the *News/Journal*. Please send your contributions TODAY to: S. S. Nicolay, Treasurer, The Lepidopterists' Society, 1500 Wakefield Drive, Virginia Beach, Virginia 23455, U.S.A. (*Be sure to specify that it is for the Commemorative volume.*)

The Finance Committee
25th Anniversary Commemorative Issue

RESEARCH REQUESTS:

Specimens and data needed for study of Euphyes dion dion and E. dion alabamiae. I would like to borrow, or obtain through exchange or purchase material of this complex. Charles T. Bryson, Box 1414, Mississippi State, MISS. 39762, U.S.A.

* * * * *

Specimens needed for examination and distribution records solicited for the 8 subspecies in the Speyeria aphrodite complex (typical aphrodite, alcestis, whitehousei, byblis, columbia, winni, mayae, and ethne). I am working on the biology and systematics of this complex, emphasizing the relationship of subspecies alcestis and aphrodite. I am also looking for help from people who can supply me with live males and females, ova, or pupae, in season. Richard A. Arnold, Dept. of Entomology, Michigan State Univ., East Lansing, MICH. 48823, U.S.A.

* * * * *

I wish to obtain records of Papilionidae from Indochina (N. and S. Vietnam, Cambodia and Laos) in private or institutional collections, for eventual publication. All contributions will be acknowledged. Please indicate if you are willing to lend your material for examination. Frederick Scott, Nova Scotia Museum, 1747 Summer St., Halifax, Nova Scotia, CANADA.

* * * * *

I am engaged in a study of the distribution and taxonomy of Central and South American DISMORPHIINAE (all subgenera of Dismorphia) and PIERINAE (particularly Catantia, Leodonta and Leptophobia). I would greatly appreciate hearing from anyone who has material with full data to sell or exchange, or who could send information on these butterflies, or who is planning a field trip in the above areas. J. H. Robert, "Belemia," Avenida Doctor Fleming 21, Vistahermosa, Alicante, SPAIN.

* * * * *

I am studying the distribution of butterflies and skippers in Ohio, and would appreciate receiving any pertinent information. Specimens are desired when available, and will be deposited in the collections of the Ohio Historical Society. Carl W. Albrecht, Natural History Division, The Ohio Historical Society, Columbus, OHIO 43211.

* * * * *

I am making a study of extinct or threatened N.A. butterflies for the Xerces Society, and would greatly appreciate any information that can be supplied on the following butterflies: Lycaeides melissa samuelis, the Karner Blue; Glaucopsyche xerces, the Xerces Blue; Eumaeus atala, the Atala; Papilio aristodemus ponceanus, the Schaus' Swallowtail.

If you have collected any of these butterflies during the past 30-40 years, please send data on locality, date, and sex; also any life history information or habitat notes would be appreciated. Lepidopterists with access to large university or museum collections are requested to check them for specimens of these four butterflies and send data.

Please also call to my attention any other N.A. butterflies which are endangered in your area. Thank you. Robert Dirig, 315 Plant Science Building, Cornell Univ., Ithaca, NEW YORK, 14850, U.S.A.

NOTICES:

Members of the Lepidopterists' Society are invited to use this section free of charge to advertise their needs and offerings in Lepidoptera. We cannot guarantee any notices, but all are expected to be made in good faith. Please be brief, clear, and check spelling. Avoid long lists. Generally, notices will be limited to 3 appearances if more than one are requested. The Editor reserves the right to alter or reject unsuitable copy.

WANTED: To buy ova of north American Sphingidae - esp. Manduca, Sphinx, Eumorpha, Pachysphinx - or to exchange for pupae of Sphinx ligustri. Bernd Lenzner, 7151 Affalterbach/Baden-Württemberg, Schillerstrasse 29, GERMANY. [Note: USDA regulations prohibit importation into U.S. of livestock without a permit. - Ed.]

WANTED: To buy the following: Godman & Salvin's Biologia Centrali-Americana, Insecta, Lepidoptera - Rhopalocera (complete); Edwards' Butterflies of North America (complete); Comstock's Butterflies of California; Scudder's Butterflies of eastern U.S. Carl W. Albrecht, Natural History Division, Ohio Historical Society, Columbus, OHIO 43211, U.S.A.

WANTED: Would like correspondence with resident collectors of Saturniidae in Africa (esp. Central Africa), Australia, & New Zealand. Richard L. Halbert, 1334 E. 2nd Street, Long Beach, CALIFORNIA, 90802, U.S.A.

WANTED: Back vols. of the Lepidopterists' News and Journal of the Lepidopterists' Society, vols. 6-9, 12, 22-25. State vols. available and asking price in your response. Steven R. Sims, Dept. of Entomology, Briggs Hall, Univ. of California, Davis, CALIF. 95616, U.S.A.

- WANTED: Back issues of Journal of the Lepidopterists' Society and News: vol. 2, nos. 5, 6, 7; vol. 3, nos. 1, 4, 5; vol. 6, nos. 4-5; vol. 7, nos. 3, 4; vol. 8, no. 6; vol. 9, nos. 2, 3, 4, 5. Send information on issues available and asking prices to: Dennis Groothuis, 1700 E. 56th St., Apt. 3808, Chicago, ILL. 60637, U.S.A.
- WANTED: Any and all data on moths and/or butterflies from Missouri for state faunal study. J. R. Heitzman, 3112 Harris Ave., Independence, MO. 64052, U.S.A.
- WANTED: I wish to buy copies (in good condition) of the following books: Carpenter, G.D.H. and E. B. Ford, 1933, Mimicry (London); Punnett, R. C., 1915, Mimicry in Butterflies (Cambridge); Eltringham, H. 1910, African Mimetic Butterflies (Oxford). And any reprints dealing with mimicry and protective coloration in butterflies or other insects. Boyce A. Drummond, Dept. of Zoology, Univ. of Florida, Gainesville, FLA. 32601, U.S.A.
- WANTED: To buy fertile ova of Rothschildia species and other silkworms to rear in the hothouse, especially those which feed on privet, lilac, ailanthus, and fruit trees. Information also wanted regarding rearing and hand pairing of butterflies and moths. Santin Angelo, 11 rue Ch. Vaillaut, 77689 Roissy, FRANCE.
- WANTED: To buy ova and pupae of Macrolepidoptera, esp. Arctiidae and Catocala. Can also exchange living material from British Columbia, Canada. H. P. Kimmich, 3372 Mahon Ave., North Vancouver, B. C., CANADA.
- WANTED: Information on collecting both butterflies and moths in the Yuma, Arizona area. I am planning to spend some time there soon, and need local knowledge. Harold Ginsberg, 10719 St. Margaret's Way, Silver Spring, MD. 20902, U.S.A.
- WANTED: To buy a copy of Comstock's Butterflies of California. State price and condition. Prof. Fred Ryser, Box 8156, University Station, Reno, NEVADA, 89507, U.S.A.
- WANTED: Information on maximum number of ova and variations of larvae produced by Actias luna ♀♀. My wild Pennsylvania ♀ laid 592 ova. Is this a possible record? Correspondence invited. Michael R. O'Brien, 22 Richards Ave., Pine Hill, N. J. 08021, U.S.A.
- WANTED: Any amount of ova, up to 3 dozen, from the following species: Argema mittrei, Automeris aurantiaca, A. leucane, Brahmaea wallichi, Bunaea alcinoe, Citheronia brissottii, Dirphia curitiba, Hemileuca maia, and Nudaurelia cytheraea. Anyone having ova from any of these please contact: Butterfly Magic, 1817 Wesley Ave., Janesville, WISC. 53545, U.S.A.
- EXCHANGE: One near-perfect male Papilio homerus for one near perfect English version of Seitz's Macrolepidoptera of the World, Volume V. Please correspond. Dr. T. W. Turner, 39 Lily Way, Mona Heights, Kingston 6, Jamaica W. I.
- EXCHANGE: Palearctic and Neotropical butterflies offered for determined western Nearctic macroheterocera. Russell Rahn, 314 N. 5th Street., Watertown, WISC. 53094, U.S.A.
- EXCHANGE: European Rhopalocera including many Hesperidae, papered, with full data, offered for ova of N. American Arctiidae, esp. of Arctia, Apantesis, Hyphoraia, Phragmatobia, etc. Gerhard Hesselbarth, Theis-Str. 24, D-457 Quakenbrück, B R Deutschland (Germany).
- EXCHANGE: I can offer Lethe creola, Callophrys (Mitoura) gryneus, and Euptychia species for other N. American butterflies. Gary Meszaros, 3868 W. 43rd St. Cleveland, OHIO 44109, U.S.A.
- EXCHANGE: Many No. American and West German butterflies, plus some tropicals, and some Sphingidae and Saturniidae, offered for Rhopalocera from anywhere in the world - esp. Hesperidae. Sgt. Kenneth R. Knight, 114 McCabe St., Ft. Bragg, N. C. 28307, U.S.A.
- SALE OR EXCHANGE: A wide selection of living Lepidoptera ova, including foreign and domestic Sphingidae and Saturniidae, as well as many species (esp. Rhopalocera) from my area. Please indicate anything you may have for sale or exchange. Dave Thompson, 2309 Iowa St., Cedar Falls, IOWA 50613 U.S.A.
- SALE OR EXCHANGE: Cocoons, chrysalids and pupae of the following: A. luna, H. cecropia, A. polyphemus, A. io, P. cynthia, P. troilus, and E. clarus. Minimum order, \$2; please add \$.50 for postage and handling. Also WANT TO BUY or will accept as trade: R. forbesi, R. orizaba, R. jorulla, R. aureta, E. calleta, C. angulifera, A. illustris, E. imperialis, C. regalis, and ♂ and ♀ A. atlas. Write for prices of offerta listed above. Michael R. O'Brien, 22 Richards Ave., Pine Hill, N.J. 08021, U.S.A.
- SALE: A variety of tree seeds, esp. Tulip Tree, Persimmon, Sweetgum, Ailanthus, and Black Walnut. Other tree seeds collected to order. Also, will rear and collect trees and Lepidoptera to order if available. Inquiries about prices and quantities are welcomed. Michael R. O'Brien, 22 Richards Ave., Pine Hill, N. J. 08021, U.S.A.
- SALE: Perfect specimens embedded in clear polyester resin (see Journ. Lepid. Soc. 21 (2), 1967) as paperweights, 3½ in. diameter. Identified with Latin and common names: Vanessa atalanta, Agraulis vanillae, Colias eurytheme (male, female), Colias (Zerene) cesonia (male, female). \$3.50 each, postpaid. Make 2 choices, please. Mrs. R. H. Harrison, 4034 Stillwood Lane, Odessa, TEXAS 79762, U.S.A.
- SALE: A. luna, live cocoons, \$.30 each; minimum order, 25. In lots of 200 or more, \$.20 each. Catherine Hartman, Rt. 4, Box 504D, Elkhart, IND. 46514, U.S.A.
- SALE: Fifty Riker mounts, 12 x 8", A-1 condition, \$1 each. Fred Lawrence, 1422 Euclid, Medford, ORE. 97501, U.S.A.
- SALE: Glassine paper, 2 x 3 ft., 33 sheets for \$1; 5 Hood insect boxes, good cond., \$14; small wooden shipping boxes (write for sizes & prices); printed customs labels, 2 sizes (samples on request), \$1.50 per thousand; book "Brazilian Portuguese Self-taught," \$2; specimens of Melitaea editha, lots of 50 (\$2) and 100 (\$3). Donald L. Baber, 1511 Drake Ave., Burlingame, CALIF. 94010, U.S.A.

- SALE: Miscellaneous papered butterflies of Washington, including some Papilio. Must sell in order to make room for the coming season's catch. 10% off on orders of \$10 or more. Write for particulars, Ruth Adamson, 415 Medcalf Lane, Montecano, WASH. 98563, U.S.A.
- SALE: Living pupae of Manduca sexta, mostly males, \$.25 each, Minimum order, \$1. Quantity orders welcome. Donald J. Dill, 7316 S. Sacramento Ave., Chicago, ILL. 60629, U.S.A.
- SALE: Over 900 rare and common species of butterflies and beetles from the Malaysian and Indonesian jungles. Rare moths and other insects. Rajah Brooke male at only \$.30 each for big orders. Sim Yam Seng, 21, Joon Hiang Rd., Singapore 19, SINGAPORE.
- SALE: Color slides of moths, butterflies and other insects. Extensive coverage of all phases of Monarch and many phases of Black Swallowtail life cycles. Slides of over a dozen silk moth species and two dozen miscellaneous insects. Send \$.50 for sample slide and detailed list. Butterfly Magic, 1817 Wesley Ave., Janesville, WISC. 53545, U.S.A.
- SALE: NEW PRICE LIST AVAILABLE, \$.25, in stamp or coin. List includes Lepidoptera, Coleoptera, other insects, alcohol-preserved, and living scorpions, living tarantulas, herpetological material, etc. Also glassine envelopes like the ones I use. Living Alaus lacteus (Tenebrionidae) beetle artificially jeweled and with short chain at \$4 each. Socialist countries and other areas where payment cannot be sent out: I will trade insects against 12-inch (30 cm) phonograph recordings (33 1/3 rpm) of folk, traditional, national or other ethnic music of your region. Write first for shipping instructions. Eduardo C. Welling M., Apartado Postal 701, Mérida, Yucatán, MÉXICO. [U.S. members - remember to obtain permit before importing live material!]
- SALE: Pupae of Hemileuca eglanderina (Saturniidae). From Yolo Co., Calif. 10 for \$6; 20 for \$10; 100 for \$35. \$6 minimum order. Richard Priestaf, 5631 Cielo Ave., Goleta, CALIF. 93017, U.S.A.

NEW AND REINSTATED MEMBERS:

- BERG, Kenneth 13985 Pike Rd., Saratoga, CALIF. 95070, U.S.A. RHOP., esp. Colias, Oeneis, Parnassius, Lycaenidae. Coll., Ex.
- BIRD, Dr. C. D. 4615 Charleswood DR. NW, Calgary, Alberta, CANADA. RHOP., esp. ecology & distribution. Coll., Ex.
- BOCK, Harry P. O. Box 3791, Philadelphia, PA. 19125, U.S.A. Lepid. Sell.
- BROADWAY, Dale E. 970 Wood River Ave., Wood River, ILL. 62095, U.S.A.
- BUCHOLZ, Thomas W. Co. A., 793rd MP Bn., APO, New York, N. Y. 09696, U.S.A.
- CARVER, Richard Ashton P. O. Box 615, Lae, PAPUA NEW GUINEA
- COOK, Carl Box 16, Center, KY. 42214. RHOP., esp. Papilionidae of the world. Coll. Ex. Buy, Sell.
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- DONAHUE, Kevin S. 7 Harrington Ave., Cortland, N. Y. 13045, U.S.A. Lepid, esp. breeding, & papered specimens. Coll. Ex. Buy, Sell.
- DOW, Linwood C. 13 June St., Portland, ME. 04102, U.S.A. Lepid., esp. Papilio, Anglewings, Saturniidae, Sphingidae. Interested in all but micros. Coll. Ex. Buy.
- DREES, Bastiaan Meijer 320 Stewart St., No. D, Morgantown, W. VA. 26505, U.S.A. RHOP., esp. Papilionidae. Coll. Ex. Buy.
- EDWARDS, E. D. c/o Div. of Entomology, C.S.I.R.O., P. O. Box 1700, Canberra City 2601, AUSTRALIA.
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- FRACK, Donald C., II 4006 N. Puente Ave., No. 30, Baldwin Park, CALIF. 91706, U.S.A. Macro. & Micro., esp. all aspects of Prodoxidae. Coll. Ex.
- GILLETTE, LTC Clyde F. 3419 El Serrito Dr., Salt Lake City, UTAH, 84109, U.S.A. RHOP. Coll.
- GLICK, Jayson I. 218-T Flavet Village, Gainesville, FLA. 32601, U.S.A. Lepid., esp. Rhop. & Macros. (Papilionidae, Saturniidae). Coll., Ex., Buy.
- GOLDSTEIN, Stephan 146 Eighth St., Providence, R. I. 02906, U.S.A. Lepid., esp. Nymphalidae, Lycaenidae. Coll.
- HAMILTON, William E. VIII 369 28th St., Apt. 46, San Francisco, CALIF. 94100, U.S.A. Lepid., esp. of San Francisco Bay area. Coll., Ex., Buy.
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- KLOPSHINSKE, Richard 6563 Benton Circle, Arvada, COLO. 80003, U.S.A., Lepid., Coll. Ex. Buy.

- KNUDSON, Edward C. Box 527 MSB, J. H. Miller Health Center, Gainesville, FLA. 32601, U.S.A.
 KOENIG, Francis 201 Nebraska St., Ottawa, ILL. 61350, U.S.A. Rhop., esp. Nymphalidae: Polygonia, Vanessa. Coll.
 KUDRNA, Otakar Univ. of Cambridge, Dept. of Zoology, Downing St., Cambridge, ENGLAND.
 LASKOWSKI, John D. Box 607, Halifax, PA. 17032, U.S.A. MACRO., esp. rearing, life hist. & photography of Saturniidae & Sphingidae. Coll., Buy, Sell.
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 McKENNA, Terence 5957 Telegraph Ave., Oakland, CALIF. 94609, U.S.A.
 MILLER, Dirk B. 13 Jordan Ave., San Anselmo, CALIF. 94960, U.S.A. Rhop., esp. Speyeria, Euphydryas, Melitaea, Plebejus, morphology, taxonomy & photography.
 MIX, Steve M. 950 Hale St., Beverly Farms, MASS. 01915, U.S.A. Lepid. esp. Rhop. & Macro. (Citheroniidae). Coll., Ex., Buy, Sell.
 MOORE, Michael 2526 N. Owaissa, Appleton, WISC. 54911, U.S.A. Macro., esp. Sphingidae, Saturniidae & Cera-tocampidae. Coll., Ex., Buy, Sell.
 MUZZY, Dave 1002 12th St., Apt. 203, Santa Monica, CALIF. 90403, U.S.A. Rhop., Coll., Ex., Buy, Sell.
 NICAT, Jacques 118 Ave. du Colonel Fabien, 93, Livry, Gargan, FRANCE. Rhop., esp. Charaxes. Coll., Ex.
 PHILLIPS, G. Lylle 2750 Adams St., Salt Lake City, UTAH 84115, U.S.A.
 PRESCOTT, Mr. & Mrs. John M. 623 W. 25th St., Erie, PA. 16502, U.S.A.
 PRIEST, Ronald J. 35091 Drakeshire Pl., No. 204, Farmington, MICH. 48024, U. S.A. Micro., esp. taxonomy, bi-ology & evolution, esp. in Great Lakes area.
 RINGEL, Dr. Gerhard 2256 West Cliff Drive, Santa Cruz, CALIF. 95060, U.S.A. Rhop., Coll., Ex.
 ROBERTSON, Joseph 7816 Penley Place, Springfield, VA. 22151, U.S.A. Lepid., esp. Rhop. (Papilio). Coll., Ex., Buy, Sell.
 SCHMITT, Kenneth A. Jr. W168 N11469 El Camino Dr., Germantown, WISC. 53022, U.S.A.
 SHEFFIELD, Albert H. 415 N. Sycamore St., Ottawa, KANS. 66067, U.S.A. Lepid., esp. Rhop. & Micro. Coll., Ex., Buy, Sell.
 SMITH, Arthur G. 687 Woodland Ave., Hayward, CALIF. 94544, U.S.A.
 THOMSON, George Backcroft, Dunblane, Perthshire, SCOTLAND FK15 OBL. Rhop., Satyridae (esp. old and new world Epinephele and Cercyonis; zoogeography and taxonomy. Coll. Ex. Buy.
 TURNER, John R. G. Div. of Biological Sciences, State Univ. of N. Y. at Stony Brook, Stony Brook, L. I., N.Y. 11790, U.S.A. Rhop., esp. genetics, evolution, population ecology, pop. genetics, mimicry, polymorphism & melanism in Acleris and Heliconius. Ex., Buy, Sell.
 VERNER, Jan Tyne n. Labem 233, Czechoslovakia 28126. Rhop., Macro.
 WAID, Nancy 3030 Bremen St., Columbus, OHIO 43224, U.S.A. Lepid., Coll., Ex., Buy, Sell.
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