

RECENT LITERATURE ON LEPIDOPTERA

Under this heading are listed each month papers on Lepidoptera from all the scientific journals which are accessible to us and our cooperating abstractors. It is hoped that eventually our coverage of the world's literature will be virtually complete. It is intended that every paper and book published after 1946 will be included. **Abstracts give all new subspecies and higher categories, with type localities and generotypes.** Papers of only local interest are merely listed. Papers devoted entirely to economic aspects will be omitted. Reprints are solicited from all publishing members. Initials of cooperating abstractors are as follows: [P.B.] - P. F. BELLINGER; [A.D.] - A. DIAKONOFF; [Y.O.] - Y. OKADA; [C.R.] - C. L. REMINGTON; [J.R.] - J. E. REMINGTON; [T.S.] - T. SHIRÔZU. A complete set of these pages for clipping and filing may be obtained for Vols. 4, 5, 6, and 7 for \$ 0.50 per volume.

B. SYSTEMATICS AND NOMENCLATURE

- Burnett, Douglass, "Can you identify fabric pests? Part one - the clothes moth." *Pests and Their Control*, vol. 18, no. 11: pp. 9-11, 18, 5 figs. Nov. 1950. Appearance and habits of 3 spp. described. [P.B.]
- Gregor, František, & Dalibor Povolný, "Sur quelques lépidoptères intéressants de la Tchécoslovaquie" [in Czech, French summary]. *Acta Soc. Ent. Českosloveniae*, vol. 47: pp. 166-168, 3 figs. 1 Oct. 1950. Records 22 spp. Figures ♂ genitalia of *Pygolopha lugubrana*, *Topeutis barbella*, and *T. criella*. [P.B.]
- Henriot, R., "Quelques observations sur trois espèces françaises du groupe de *Cryphia (Bryophila) algae* F." [in French]. *Rev. Franç. Lépid.*, vol. 12: pp. 99-101. "May-June" [7 Dec.] 1949.
- Vari, L., "Nederlandse Lepidoptera 5^e faunistische mededeling" [in Dutch]. *Ent. Berichten*, vol. 13: pp. 180-184, 193-198, 18 figs. 1 Dec. 1950, 1 Jan. 1951. Discusses 18 spp. of Microlepidoptera - 12 are new for the Dutch fauna; gives figures of genitalia and of mine-galleries; adds synonymy of 18 spp. [A.D.]

E. DISTRIBUTION AND PHENOLOGY

- Blackie, J.E.H., "The range and distribution of *Agapetes galathea* L." *Entomologist*, vol. 84: pp. 132-135. June 1951. More local in England than would be expected. Raises questions as to possible bearing of larval dimorphism, mite parasites of adult, and oviposition habits on this distribution. [P.B.]
- Bourgogne, Jean, "*Pieris manni* existe-t-il dans la région parisienne?" [in French]. *Rev. Franç. Lépid.*, vol. 13: pp. 19-20. "Jan.-Feb." [31 Mar.] 1951.
- Burgeff, H., "Die Meeralspengrenze der Zygaenen (Lep.), eine mit Hilfe der Populationsanalyse der Arten der Gattung *Zygaena* (Lepidoptera) durchgeführte Untersuchung über die Lokalisation und die Bedeutung geographischer Rassen in ihrem Zusammenhang mit der Eiszeit" [in German]. *Biol. Zbl.*, vol. 70: pp. 1-23, 14 figs. 1951. The range of some species of *Zygaena* is bounded on either the East or the West by the region where the southern Alps meet the Mediterranean. The author explains this distribution, and the geographic variation in species not so limited, in terms of the glacial history of the area. [P.B.]
- Freeman, T. N., "Northern Canada and some northern butterflies." *Lep. News*, vol. 5: pp. 41-42, 1 fig. 1951.
- Harris, Lucien, Jr., "Notes and range extensions of butterflies in Georgia." *Lep. News*, vol. 4: pp. 43-44. "1950" [Jan. 1951].
- Judd, W.W., "*Acentropus niveus* (Oliv.) (Lepidoptera: Pyralidae) on the north shore of Lake Erie with a consideration of its distribution in North America." *Canad. Ent.*, vol. 82: pp. 250-252, 2 maps. Dec. 1950. Species occurs in lower Great Lakes and St. Lawrence River region; probably native. Food plant *Ceratophyllum*. [P.B.]
- Le Marchand, S., "Une belle capture" [in French]. *Rev. Franç. Lépid.*, vol. 12: pp. 232-233. "Mar.-Apr." [25 Sept.] 1950. Notes on the giant micro *Atremaea lonchoptera*. [P.B.]
- Munro, J. A., & Wayne J. Colberg, "European Corn Borer occurrences in North Dakota." *80th Ann. Rep. Ent. Soc. Ontario*: pp. 20-21. 1950. *Pyrausta nubilalis*.

- Munroe, Eugene, "The occurrence of a butterfly in the Pribilof Islands." *Lep. News*, vol. 4: p. 44. "1950" [Jan. 1951].
- Norman, T., "Where do butterflies go?" *Journ. Bombay Nat. Hist. Soc.*, vol. 49: pp. 566-568. Dec. 1950. Comments on the causes of variation in seasonal abundance of tropical butterflies. [P.B.]
- Picard, J., "Repartition de *Heteropterus morpheus* Pallas en Europe" [in French]. *Rev. Franç. Lépid.*, vol. 12: pp. 149-152, 1 map. "Sept.-Oct. 1949" [25 Jan. 1950]. Figures present scattered occurrence and speculates on causes of this distribution. [P.B.]
- Reid, W., "Records of moth trap in Sheffield, 1950." *Entomologist*, vol. 48: pp. 78-82. Apr. 1951. Records of atmospheric conditions and captures over a 3 month period. [P.B.]
- Suranyi, Paul, "Ein neuer Schädling in Europa (*Hyphantria cunea* Drury)" [in German]. *Proc. VIII Int. Ent. Congr.*, pp. 687-692, 4 figs. 1950. Biology of this North American sp., recently established in Hungary. [P.B.]
- Toxopeus, L. J., "Java in Sumatra (Lepidoptera)" [in Dutch]. *Idea*, vol. 8: pp. 102-103. 31 Jan. 1951. Discusses great convergence of Rhopalocera of Kalianda region in S. Sumatra with fauna of Java. [A.D.]
- Urbahn, Ernst, "Beobachtungen auf Rügen 1943-45 (Eine Ergänzung zur "Pommern-fauna")" [in German]. *Zeits. Lepidopt.*, vol. 1: pp. 11-21, 1 pl., 2 maps. 1 May 1950. Discusses various ecological divisions of the area and their fauna. [P.B.]

F. BIOLOGY AND IMMATURE STAGES

- Benoit, P. L. G., "Contribution à l'étude de la faune parasitaire de *Sylepta derogata* Fabricius (Lepid. Pyral.) au Congo Belge" [in French]. *Bull. Ann. Soc. Ent. Belg.*, vol. 86: pp. 87-103. 6 May 1950. Describes the biology of 2 *Apanteles* spp. [P.B.]
- Bergold, G. H., "The polyhedral disease of the Spruce Budworm, *Choristoneura fumiferana* (Clem.) (Lepidoptera: Tortricidae)" *Canad. Journ. Zool.*, vol. 29: pp. 17-23, 3 pls. Feb. 1951.
- Blunck, H., "Zur Kenntnis der Hyperparasiten von *Pieris brassicae* L. 3. Beitrag: *Hermitis similis* Taschb. nov. var. *sulcatus*. Kennzeichen und Verhalten der Vollkerfe" [in German]. *Zeits. Angew. Ent.*, vol. 32: pp. 335-405, 15 figs. May 1951.
- Bovey, Paul, "Le carpocapse des pommes *Enarmonia pomonella* (L.), ravageur important des abricots en Valais (Suisse)" [in French]. *Proc. VIII Int. Ent. Congr.*, pp. 601-608, 6 figs. 1950. Biology and control. [P.B.]
- Breakey, E. P., "Natural control of the Orange Tortrix in western Washington." *Journ. Econ. Ent.*, vol. 44: p. 424. June 1951. Parasites of *Argyrotaenia citrana*. [P.B.]
- Candura, G. S., "Reperti su la *Sitotroga cerealella* Oliv. nell' Italia settentrionale e su altre tignole dei viveri" [in Italian]. *Boll. Zool. Agr. Bachic.*, vol. 16: pp. 99-146, 6 figs. 1950. Describes and figures all stages and discusses biology. [P.B.]
- Chace, Lynwood M., "A *Cecropia* moth emerges." *Natural History*, vol. 59: pp. 446-449, 9 figs. Dec. 1950. All pictures, which are excellent. [P.B.]
- Chiaromonte, A., "L'*Achaea catella* Guen. nella Somalia Italiana" [in Italian, English summary]. *Proc. VIII Int. Ent. Congr.*, pp. 616-631, 3 figs. 1950. Discusses biology of this sp., destructive to castor plants, and of some relatives. [P.B.]
- Cleu, H., "La vie larvaire de *Derthisa scoriacea* Esp." [in French]. *Rev. Franç. Lépid.*, vol. 12: pp. 319-320. "Sept.-Oct." [10 Dec.] 1950. Food plants *Anthericum* and *Narcissus*. [P.B.]
- Couturier, A., "La teigne de la betterave en France (*Phthorimaea ocellatella* Boyd. Lepid. Gelechiidae)" [in French]. *Proc. VIII Int. Ent. Congr.*, pp. 632-636. 1950. Biology, parasites, control. [P.B.]
- Diakonoff, A., "Varensporangien als biotoop voor Microlepidoptera" [in Dutch: Sporangia of ferns as a biotope for Microlepidoptera]. *Idea*, vol. 8: pp. 99-100. 31 Jan. 1951.
- Docters van Leeuwen, W. M., "Zoocecidia van het eiland Terschelling, 2^e mededeling" [in Dutch]. *Ent. Berichten*, vol. 13: pp. 168-173. 1 Nov. 1950. Records 3 galls caused by Lepidoptera. [A.D.]
- Docters van Leeuwen, W. M., "Kweek van *Macrothylacia*" [in Dutch: Rearing of M.]. *Ent. Berichten*, vol. 13: pp. 30-31. 1 Dec. 1951. / Feb. 1952
- Dowden, Philip B., & V. M. Carolin, "Natural control factors affecting the Spruce Budworm in the Adirondacks during 1946-1948." *Journ. Econ. Ent.*, vol. 43: pp. 774-783. Dec. 1950. Parasites of *Archips fumiferana*. [P.B.]

- Dresner, Edgar, "The toxic effect of *Beauveria bassiana* (Bals.) Vuill. on insects." *Journ. N.Y. Ent. Soc.*, vol. 58: pp. 269-278. 19 Feb. 1951. Experiments on *Phthorimaea operculella* etc. [P.B.]
- El Zoheiry, M. S., "*Heliothis nubigera* H.-S. (Lepidoptera- Noctuidae), a new pest of watermelons in Egypt." *Proc. VIII Int. Ent. Congr.*, pp. 732-736, 4 figs. 1950. Biology and control. [P.B.]
- Flock, R.A., "Damage to household goods by Fan Palm Caterpillar." *Journ. Econ. Ent.*, vol. 44: pp. 260-261. Apr. 1951. *Litoprosopus coachellae*; larvae feed on *Washingtonia* spp.; damage carpets etc. in collecting material for cocoon. [P.B.]
- Foltin, Hans, "Biologische Beobachtungen aus Oberösterreich" [in German]. *Z. Wiener Ent. Ges.*, vol. 62: pp. 12-16. 15 Apr. 1951. Biological notes on *Lycaena cyllarus*, *Lophopteryx camelina*, *Hypena obesalis*, *Zygaena filipendulae*, *Miana ophiogramma*, *Hadena scolopacina*. [P.B.]
- Foltin, Hans, "Etwas über die Biologie von *Lasiocampa quercus* L." [in German]. *Z. Wiener Ent. Ges.*, vol. 62: pp. 52-54. 30 June 1951.
- Fraser, A.G.L., "A butterfly (*Catopsilia crocale*) with a defect in right hind wing." *Journ. Bombay Nat. Hist. Soc.*, vol. 49: pp. 797-799. Apr. 1951. Fungus growing on living wing. [P.B.]
- Fullaway, D.T., "Description of a *Brachymeria* parasitic on *Agonoxena argaula* Meyr. in Samoa." *Proc. Hawaiian Ent. Soc.*, vol. 14: pp. 63-64. Mar. 1950.
- Gaillard, R., "Complément à l'étude de H. Beuret sur les *Plebeius argus* de Nîmes" [in French]. *Rev. Franç. Lépid.*, vol. 12: p. 281. "May-June" [11 Dec.] 1950. Food plants: *P. argus*, *Lotus tenuis*, *Onobrychis supina*; *Lysandra escheri splendens*, *Astragalus monspessulanus*. [P.B.]
- Gaines, J.C., and H.J. Reinhard, "A sweet clover borer in Texas." *Journ. Econ. Ent.*, vol. 44: pp. 623-624, 1 fig. Aug. 1951. *Walshia amorphella*; also on *Melilotus alba*. [P.B.]
- Gómez Clemente, Federico, "Estudios de lucha natural contra *Earias insulana*" [in Spanish]. *Bol. Patol. Veg. Ent. Agric.*, vol. 17: pp. 83-95, 7 figs. 1950. Biology of the braconid parasite *Rhogas aligarhensis*, with notes on some other parasites. [P.B.]
- Haggett, G., "Further observations on *Zeuzera pyrina* L." *Entomologist*, vol. 84: pp. 31-33. Feb. 1951. Habits, variation, distribution. [P.B.]
- Haggett, G., "*Eupithecia intricata* Zett. f. *arceuthata* Frr. (Lep., Geometridae)." *Entomologist*, vol. 84: pp. 58-60. March 1951. Habits, distribution, description of larva; food plants *Cupressus* and *Chamaecyparis*. [P.B.]
- Hamstead, Eywood O., "Codling moth oöcyte studies." *Journ. Econ. Ent.*, vol. 43: pp. 724-727. Oct. 1950. Counts of oocytes in trapped and reared ♀♀ of *Carpocapsa pomonella*; moths evidently lay more freely in nature than in captivity. [P.B.]
- Hardy, G.A., "Notes on the life-history of the Garry Oak Looper, *Lambdina fiscellaria somnaria* Hlnt." *Proc. Ent. Soc. Brit. Columbia*, vol. 46: pp. 13-14. 15 May 1950. Describes early stages and habits. Food plant *Quercus garryana*. [P.B.]
- Herbulot, C., "Troisième note sur Saint-Tropez" [in French]. *Lambillionia*, vol. 50: pp. 48-52. 25 June 1950. Records of 33 spp., with biological notes on some. [P.B.]
- Hering, Erich Martin, "Die Oligophagie phytophager Insekten als Hinweis auf eine Verwandtschaft der Rosaceae mit den Familien der Amentiferae" [in German]. *Proc. VIII Int. Ent. Congr.*, pp. 74-79. 1950. Gives a classification of phytophagous insects according to the number and variety of their foodplants. Lists a large number of oligophagous species (those feeding on a few plants which are not closely related) which are restricted to representatives of the Rosaceae and Amentiferae, as evidence for serological similarity and possible relationship between these groups. [P.B.]
- Howden, Henry F., & Anne T., & Paul O. Richter, "Insects feeding on Poison Oak (*Rhus toxicodendron* L.)." *Coleop. Bull.*, vol. 5: pp. 17-19. Apr. 1951. Lists *Paectes oculatrix*, *Epipaschia zelleri*, *Episimus argutannus*, *Cacoecia argyrospila*, *Lithocolletis guttifimella*, *Gracilaria rhoifoliella*. [P.B.]
- Howe, W.L., "Biology and host relationships of the Squash Vine Borer." *Journ. Econ. Ent.*, vol. 43: pp. 480-483. Aug. 1950. *Melittia cucurbitae*.
- Iwase, Taro, "Lessons from here and there (1)" [in Japanese]. *Butt. and Moths* (*Trans. Lep. Soc. Japan*), vol. 2: p. 15. 1951. Notes on larva and pupa of *Zerynthia* [Y.O.]

- Laird, Marshall, "Lepidopterous eggs and larvae from the exterior of aircraft fuselages." *Nature*, vol. 166: p. 1081. 23 Dec. 1950. Noctuid found in New Zealand on plane from Fiji. [P.B.]
- Latif, Abdul, & Ch. Muhammed Yunus, "Food-plants of Citrus Leaf-Miner (*Phyllocnistis citrella* Stn.) in the Punjab." *Bull. Ent. Res.*, vol. 42: pp. 311-316. Aug. 1951. Recorded from *Citrus* spp. and *Aegle marmelos*. [P.B.]
- de Lucca, C., "Notes on the biology of *Cnephasia gueneana* Duponchel (Lepidoptera: Tortricidae)." *Entomologist*, vol. 84: pp. 205-207. Sept. 1951. Describes larva; lists 8 food plants. [P.B.]
- Luteršek, Dragutin, "Beitrag zur Kenntnis der Biologie des *Calosoma sycophanta* L. und *Calosoma inquisitor* L. als Feinde des Schwammspinners (*L. dispar* L.)" [in Jugoslav, German summary]. *Bull. Coll. Forestry Univ. Belgrad*, vol. 1: pp. 353-365. 1950.
- Munroe, Eugene, "Field notes on the butterflies of Knob Lake, Northern Quebec." *Lep. News*, vol. 5: pp. 7-9. [June] 1951.
- Pastraña, Jose & Hugo Gahan, "Cría en masa de *Macrocentrus ancylivorus* Roh., parasito natural del 'gusano del duraznero' en la Republica Argentina" [in Spanish]. *Pub. Inst. Sanidad Veg. Argentina*, series B, no. 19: 22 pp., 12 figs. 1950. Describes the technique used in mass-rearing of this parasite on *Gnorimoschema operculella*. [P.B.]
- Patočka, Jan, "Quelques notices sur l'écologie d'un tortricide *Epiblema proximana* H. S. (Lep. Tortric.)" [in Czech, French summary]. *Acta Soc. Ent. Českosloveniae*, vol. 45: pp. 89-94, 19 figs. 1 May 1948. Describes early stages; food plant fir. [P.B.]

G. PHYSIOLOGY AND BEHAVIOR

- Agrell, Ivar, "Pupal diapause caused by vitamin deficiency." *Nature*, vol. 167: pp. 283-284, 1 fig. 17 Feb. 1951. Injection of aneurin and pantothenic acid raises the respiratory quotient of *Endromis versicolora* pupae, indicating that temporary deficiency of these substances may produce lowered metabolism and diapause. [P.B.]
- Allegret, Paul, "Influence de la rétention expérimentale de la soie sur la métamorphose de *Bombyx mori* (L.)" [in French]. *C.R. Acad. Sci.*, vol. 232: pp. 268-270. 15 Jan. 1951. Preventing the larva from emptying the silk glands causes death in the larval or pupal stage. [P.B.]
- Allegret, Paul, "Retard de la nymphose chez *Galleria mellonella* L. après la sécrétion du cocon. Influence de l'alimentation" [in French]. *C. R. Acad. Sci.*, vol. 233: pp. 441-443. 30 July 1951. Delayed pupation results from abundance in food which must be excreted as silk. [P.B.]
- Götz, Bruno, "Über die tageszeitliche Konstanz beim Ausschlüpfen von Lepidopteren" [in German]. *Zool. Jahrb. allg. Zool.*, vol. 62: pp. 355-365, 5 figs. 5 Apr. 1951. Experiments on *Ephestia*, *Bombyx* and several tortricids show that these spp. eclose most frequently at certain hours, and that light and internal factors both determine this regularity. [P.B.]
- Hiestand, W. A., "The resistance to nitrogen narcosis of insects, spiders, and phalangids." *Anat. Rec.*, vol. 108: p. 614. Nov. 1950. Abstract only.

H. MIGRATION

- Eliot, N., "Flying Satyridae." *Entomologist*, vol. 84: pp. 70-71. Mar. 1951. Local movement of three spp. in Cyprus. [P.B.]
- Lempke, B. J., "Trekvlinders in 1950 (elfde jaarverslag)" [in Dutch: Migratory Lepidoptera in 1950, 11th annual survey]. *Ent. Berichten*, vol. 13: pp. 341-348. 1 Oct. 1951.
- Nordström, Frithiof, "Pieris brassicae på vandring" [in Swedish, German summary]. *Ent. Tidskr.*, vol. 72: pp. 79-80. 15 Apr. 1951. Migration.
- Ploeger, P. L., "Trek van *Pieris brassicae* op Texel" [in Dutch: Migration of *P. b.* in Texel Island]. *Ent. Berichten*, vol. 13: p. 254. 1 Apr. 1951.
- Temple, Vere, "Immigration of *Pieris brassicae*." *Entomologist*, vol. 84: pp. 214-215. Sept. 1951.