

TORTS

Newsletter of the Troop of Reputed Tortricid Systematists

TORTS: GETTING OFF THE GROUND

Thank you for your positive responses to the first TORTS newsletter. Please continue to send me comments on your research projects, publications, meetings, and other items of interest. Several additional colleagues have been added to the membership list, and their names and addresses will appear in the January/February 2001 issue of the Newsletter.

As described in the first Newsletter, the main purpose of the second issue each year is to provide a bibliography of recently published papers on Tortricidae. Based on a variety of sources, including members, I have compiled two lists of titles, one of papers published in 1998 and one of those published in 1999; the latter is likely incomplete. I have tried to include a wide range of topics, from pheromone chemistry and pest management to faunal studies and systematics, in hopes that everyone will find something of interest, regardless of the focus of your research. If you know of missing titles or find mistakes in the list, please bring them to my attention so that they can be shared with all of the members. Thank you.

WEB PRODUCTS

The revised and updated checklist of the Tortricidae of North America north of Mexico now can be viewed on the Essig Museum of Entomology site, University of California, Berkeley. The address is: <http://www.mip.berkeley.edu/essig/>.

A preliminary checklist of the Tortricidae of the World soon will be available on the USDA, Systematic Entomology website: <http://www.usda.sel.barc.usda.gov>. I am eager to receive your comments on a number of issues: (1) the assignment of genera to tribes; (2) the assignment of species to genera; (3) generic synonymies; and (4) omissions. In particular, I would appreciate your thoughts on the use of *Olethreutes*, *Phiaris*, *Celypha*, and *Pristerognatha*. It seems like no two faunal lists treat them in the same manner. Also, I am eager to receive input on the validity and/or synonymy of *Endopiza* and *Paralobesia*, and *Retinea* and *Petrova*. Possibly we can reach consensus on the synonymy of these (and other) genera on a world basis. Please send your comments to John Brown. I hope to update the list every 6 months. In time, I hope to convert the list into a catalogue with complete citations of original descriptions, food plants, distribution, etc. Josef Razowski already has laid the groundwork for such work in his fine series of catalogues based on regional faunas.

A preliminary food plant database for Tortricidae also soon will be available on the USDA, Systematic Entomology Laboratory website. The database represents the combined, but independent, efforts of Gaeden Robinson (BMNH) and John Brown (USNM). It is likely that the database includes less than one-fourth of the published host records for Tortricidae, but it is a beginning. If you can contribute to the database, please send your host records and literature citations to John Brown, Systematic Entomology Laboratory, USDA, c/o National Museum of Natural History, Washington, DC 20560-0168, USA.

MONA IS 30 YEARS OLD

In September 1970, Richard B. Dominick and Charles R. Edwards drafted the introduction to the first fascicle of the venerable *Moths of America North of Mexico* series of publications. Affectionately known as MONA, that first monograph, Fascicle 21 Sphingoidea, Hawkmoths, by Ronald W. Hodges began an ambitious publication project that successfully continues to document that portion of the lepidopteran fauna, known as moths, of the Neartic Region plus Greenland.

In 30 years of publication, the MONA series has documented the occurrence of 2,381 species from the region. Three hundred thirteen species and 23 subspecies were described as new to science in the series. Larger showy and popular moths such as the sphinx moths and giant silk moths are included as well as some of the smallest moths, the Cosmopterigidae.

In its conception MONA was meant to be an authoritative replacement for the long out of date W. J. Holland's *The Moth Book*, originally published in 1903 and reprinted in 1968 by Dover. The highly popular and, until 1968, much sought after Holland provide some color illustrations, brief annotations about the species, and briefer taxonomic notes. Yet the number of species in Holland was limited, and nearly all species of smaller moths could not be identified with this, the only guide to moths in North America.

The idea for MONA needed time to develop, and eventually a nucleus of people including R. B. Dominick, C. R. Edwards, D. C. Ferguson, J. F. Franclemont, R. W. Hodges, E. G. Munroe, E. W. Classey, B. Harley, and others joined their knowledge, enthusiasm, and tenacity to publish the first MONA fascicle.

Five years after the first monograph was published, a public non-profit foundation, the Wedge Entomological Research Foundation, named in

honor of Dominick's home in South Carolina, was formed to continue the vision of Richard Dominick, who unexpectedly died after just a few years and after only a few monographs were published.

Now in its 26th year, the foundation continues to publish the highly acclaimed series. The Entomological Society of America awarded Ronald W. Hodges its prestigious Thomas Say Award in 1990 for his leadership with the MONA series. Published reviews of the monographs in the MONA series have been highly complimentary.

Upcoming fascicles include the tribe Macariini (Geometridae) and the genus *Catocala* (Noctuidae). The Wedge Entomological Foundation is actively searching for competent authors of monographs for the series. In addition, the board of directors of the foundation desires to publish suitable monographs beyond the scope of the MONA series. Interested persons should contact the Foundation at: Wedge Entomological Research Foundation, 85253 Ridgetop Drive, Eugene, Oregon 97405-9535, USA.

The Wedge Entomological Research Foundation gratefully thanks its subscribers, its supporters, the persons who provide data and energy to assist the authors, and the users of the monographs. Were there not a need, the project could not be sustained. Were there not an interest and dedication of moth collectors, the project would be impeded. Completion of the preliminary survey remains a major goal.

For further information contact Dr. Ronald Hodges at the address provided above (e-mail: rwhodges@continent.com).

MONA fascicles in progress on Tortricidae include the tribe Sparganothini (by J. Powell & J. Brown) and the tribe Cochlyini (by M. Pogue, J. Brown & E. Metzler).

TORTRICIDAE BIBLIOGRAPHY
FOR 1998

- Ainley, R. G. 1998. *Lozotaenoides formosanus* Geyer (Lep.: Tortricidae). Entomol. Rec. J. Var. 110: 298.
- AliNiasee, M. T. & M. Arshad. 1998. Susceptibility of immature stages of the oblique-banded leafroller, *Choristoneura rosaceana* (Lepidoptera: Tortricidae), to fenoxycarb. J. Entomol. Soc. British Columbia 95: 59-64.
- Aston, A. 1998. *Aethes beatricella* Wals. (Lep.: Tortricidae) new to north Hampshire. Entomol. Rec. J. Var. 110: 168.
- Aston, A. 1998. *Cochylis molliculana* Zell. (Lep.: Tortricidae) new to north Hampshire. Entomol. Rec. J. Var. 110: 168.
- Athanassov, A. Z., P. Jeanneret, P.-J. Charmillot & D. Renard. 1998. Parasitoids of codling moth and other leafrollers (Lepidoptera: Tortricidae) in apple orchards and forests in south-west Switzerland. Mitt. Schweiz. Entomol. Gesel. 71: 153-162.
- Bae, Y.-S. & K.-T. Park. 1998. The genus *Pammene* Huebner (Lepidoptera, Tortricidae) from Korea, with descriptions of two new species. Zool. Studies 37: 291-301.
- Barker, J. F. 1998. Effect of *Bacillus thuringiensis* subsp. *kurstaki* toxin on the mortality and development of the larval stages of the banded sunflower moth (Lepidoptera: Cochylidae). J. Econ. Entomol. 91: 1084-1088.
- Biesenbaum, W. 1998. 205. *Acleris lacordairana* (Duponchel, 1836) - records in Kaiserstuhl and neighboring Alsace (Lep., Tortricidae). Mitt. Entomol. Verh. Stuttgart 33: 131. [In German]
- Bloem, S., K. A. Rao & A. L. Knight. 1998. Oviposition by sterile codling moths, *Cydia pomonella* (Lepidoptera: Tortricidae), and control of wild populations with combined releases of sterile moths and egg parasitoids. J. Entomol. Soc. British Columbia 95: 99-110.
- Bond, K. G. M. 1998. *Epiphyas postvittana* (Walker) (Lep., Tortricidae) new to Ireland. Entomol. Rec. J. Var. 110: 250.
- Briere, J.-F. & P. Pacros. 1998. Comparison of temperature-dependent growth models with the development of *Lobesia botrana* (Lepidoptera: Tortricidae). Environ. Entomol. 27: 94-101.
- Brown, J. W. 1998. Description of *Strophotina*, new genus, from Central and South America (Lepidoptera: Tortricidae). Proc. Entomol. Soc. Washington 100: 43-49.
- Brown, J. W. 1998. A new genus of tortricid moths from Chile related to *Varifula* Razowski (Lepidoptera: Tortricidae). J. Lepid. Soc. 52: 177-181.
- Brown, J. W. 1998. A new species of *Pseudocomotis* from Costa Rica (Lepidoptera: Tortricidae: Chlidanotinae), with the first reported female of the genus. Trop. Lepid. 9: 55-57.
- Brown, J. W. & S. Passoa. 1998. Larval foodplants of Euliini (Lepidoptera: Tortricidae): from *Abies* to *Vitis*. Pan-Pac. Entomol. 74: 1-11.
- Bullock, R. C., E. E. Killer & R. R. Pelosi. 1998. Population dynamics and citrus fruit damage by two species of leafroller, *Argyrotaenia amatana* and *Argyrotaenia kimballi* (Lepidoptera: Tortricidae). Proc. Florida St. Horticult. Soc. 110: 27-32.
- Byun, B.-K., Y.-S. Bae & K.-T. Park. 1998. Illustrated catalogue of the Tortricidae in Korea (Lepidoptera). In: Park, K.-T. (ed.), Insects of Korea. 2. Korea Res. Inst. Biosci., Ctr. Insect Syst., Chuncheon, Korea.
- Calkins, C. O. 1998. Review of the codling moth areawide suppression program in the western United States. J. Agric. Entomol. 15: 327-333.
- Candau, J.-N., R. A. Fleming & A. Hopkins. 1998. Spatiotemporal patterns of large-scale defoliation caused by the spruce budworm in Ontario since 1941. Canad. J. For. Res. 28: 1733-1741.
- Cappuccino, N., D. Lavertu, Y. Bergeron & J. Regniere. 1998. Spruce budworm impact, abundance and parasitism create a patchy landscape. Oecologia 114: 236-242.

- Carrillo, R., P. Astorga & M. Neira. 1998 [1997]. Diapause in field populations of codling moth *Cydia pomonella* (L.) (Lepidoptera: Tortricidae) under southern Chile conditions. *Revta. Chil. Entomol.* 24: 23-25.
- Cusson, M., J. R. Barron, H. Goulet, J. Regniere & D. Doucet. 1998. Biology and status of *Tranosema rostrale rostrale* (Hymenoptera: Ichneumonidae), a parasitoid of the eastern spruce budworm (Lepidoptera: Tortricidae). *Ann. Entomol. Soc. Am.* 91: 87-93.
- de Groot, P., G. G. Grant, R. W. Nott & D. R. Langevin. 1998. Seasonal and diurnal flight activity of male *Eucosma gloriola* (Lepidoptera: Tortricidae). *Canad. Entomol.* 130: 377-381.
- Deverno, L. L., G. A. Smith & K. J. Harrison. 1998. Randomly amplified polymorphic DNA evidence of introgression in two closely related sympatric species of coniferophagous *Choristoneura* (Lepidoptera: Tortricidae) in Atlantic Canada. *Ann. Entomol. Soc. Am.* 91: 248-259.
- Diaconu, A. 1998 [1997]. Contributions to the biology and morphology of *Acleris variegana* (Denis & Schiffermuller, 1775) (Lepidoptera, Tortricidae). *Entomol. Roman.* 2: 89-93.
- Diadechko, N. P., V. S. Shelestova, O. J. Goncharenko & T. R. Stefanovska. 1998. The use of natural agents for crop protection against *Tortrix* pest complex in Ukraine. *Meded. Facult. Landbouw. Toeg. Biol. Weten. Univ. Gent* 63: 497-502.
- El-Sayed, A., R. C. Unelius, I. Liblikas, J. Lofqvist, M. Bengtsson & P. Witzgall. 1998. Effect of codlemone isomers on codling moth, *Cydia pomonella* (Lepidoptera: Tortricidae) male attraction. *Environ. Entomol.* 27: 1250-1254.
- El-Sayed, A., P. Witzgall & H. Arn. 1998. Location of the pheromone producing gland in the European grapevine moth, *Lobesia botrana* (Lepidoptera: Tortricidae). *Appl. Entomol. Zool.* 33: 507-511.
- Esartia, G. & M. Gergedava. 1998. To the study of tortricids (Lepidoptera, Tortricidae) of Svaneti fauna. *Bull. Georgian Acad. Sci.* 158: 155-157.
- Fadamiro, H. A., A. A. Cosse, T. Dittl & T. C. Baker. 1998. Suppression of mating of blackheaded fireworm (Lepidoptera: Tortricidae) in Wisconsin cranberry marshes using MSTRS devices. *J. Agric.* 15: 377-386.
- Falck, P. & O. Karsholt. 1998. *Lobesia virulenta* Bae & Komai, 1991 recorded for the first time in Europe, with description of a new subspecies (Lepidoptera, Tortricidae). *Entomol. Meddr.* 66: 117-126.
- Foster, S. P. & A. J. Howard. 1998. Influence of stimuli from *Camellia japonica* on ovipositional behavior of generalist herbivore *Epiphyas postvittana*. *J. Chem. Ecol.* 24: 1251-1275.
- Gibeaux, C. A. & G. C. Luquet. 1998. Distinction, variation et repartition française des deux tordeuses affines *Eudemis profundana* (D. & S., 1775) et *Eudemis porphyra* (Hb., [1779]). *Alexandria* 20: 273-285.
- Gieboltowicz, J. M. & N. L. Brooks. 1998. The circadian rhythm of sperm release in the codling moth, *Cydia pomonella*. *Entomol. Exp. Appl.* 88: 229-234.
- Gut, L. J. & J. F. Brunner. 1998. Pheromone-based management of codling moth (Lepidoptera: Tortricidae) in Washington apple orchards. *J. Agric. Entomol.* 15: 70-72.
- Hardwick, L. W. 1998. *Platynota rostrana* (Walker) (Lep.: Tortricidae) and *Pyroderces? rileyi* (Walsingham) (Lep.: Cosmopterigidae) discovered in garden centre in Britain in 1987/88. *Entomol. Rec. J. Var.* 110: 70-72.
- Heckford, R. J. 1998. *Bactra lacteana* Caradja, 1916 (Lepidoptera: Tortricidae) a newly recognized British species. *Entomol. Gaz.* 49: 219-228.
- Heckford, R. J. 1998. *Bactra lancealana* (Hubner) (Lepidoptera: Tortricidae) bred from *Eriophyllum angustifolium* Honck. *Entomol. Gaz.* 49: 228.
- Hung, C.-C., J.-S. Hwang & R.-F. Hou. 1998. Artificial rearing of macadamia nut borer (*Cryptophlebia ombrodelta* (Lower)) and its eclosion and mating behaviour. *Plant Prot. Bull.* 40: 297-307.

- Hyink, O., S. Graves, F. M. Fairbarin & V. K. Ward. 1998. Mapping and polyhedrin gene analysis of the *Epiphyas postvittana* nucleopolyhedrosis genome. *J. Gen. Virol.* 79: 2853-2862.
- Jalva, J. & W. E. Miller. 1998. Boreal olethreutines, 1 (Lepidoptera: Tortricidae): new synonymies and Holarctic records. *Entomol. Fenn.* 9: 137-142.
- Jewess, P. J. 1998. Rearing *Cydia corollana* (Hb.) (Lep.: Tortricidae) and other insects from galls of *Saperda populnea* (L.) (Col.: Cerambycidae). *Entomol. Rec. J. Var.* 110: 267-268.
- Jyoti, J. L., G. J. Brewer & W. G. Schmidt. 1998. Development of banded sunflower moth (Lepidoptera: Cochylidae) and sunflower moth (Lepidoptera: Pyralidae) on three diets. *J. Kansas Entomol. Soc.* 71: 18-22.
- Knight, A. L. & J. E. Turner. 1998. Sexual biology of *Pandemis pyrusana* (Lepidoptera: Tortricidae) under laboratory conditions. *J. Entomol. Soc. British Columbia* 95: 89-94.
- Koster, J. C. & E. J. Van Nieuwerkerken. 1998. *Endothenia oblongana* in the Netherlands: a tortricid of the coastal village landscape (Lepidoptera: Tortricidae). *Entomol. Ber.* 58Z: 145-152. [In Dutch]
- Kuznetsov, V. I., J. Jalava & J. Kullberg. 1998. The leafrollers (Lepidoptera: Tortricidae) of western Tuva, with description of *Cochylimorpha arenosana* sp. n. *Entomol. Fenn.* 9: 197-209.
- Landolt, P. J., R. W. Hofstetter & L. Biddick. 1998. Plant essential oils as arrestants and repellents for neonate larvae of the codling moth (Lepidoptera: Tortricidae). *Environ. Entomol.* 28: 954-960.
- Landolt, P. J., R. W. Hofstetter & P. S. Chapman. 1998. Neonate codling moth larvae (Lepidoptera: Tortricidae) orient anemotactically to odor of immature apple fruit. *Pan-Pac. Entomol.* 74: 140-149.
- Li, S.-Y. & I. S. Otvos. 1998. Effects of cold storage on adult emergence and fecundity of *Choristoneura occidentalis* (Lepidoptera: Tortricidae). *J. Entomol. Soc. British Columbia* 95: 3-8.
- Liu, Y.-Q. & S.-C. Yan. 1998. Descriptions of five new species of tribe Grapholitini (Lepidoptera: Tortricidae). *Entomotaxon.* 20: 277-281.
- Maier, C. T. & V. C. Mastro. 1998. Discovery, abundance, and distribution of the exotic apple tortrix, *Archips fuscocupreanus* Walsingham (Lepidoptera: Tortricidae), in the northeastern United States. *Proc. Entomol. Soc. Washington* 100: 545-552.
- Martin, A., P. Baronio, N. Baldassari & G. Rocchetta. 1998. I lepidotteri tortricidi del castagno (*Pammene fasciana* (L.), *Cydia fagiglandana* (Zell.) e *Cydia splendana* (Hb.)) valutati come un'unica entità di danno. *Boll. Ist. Entomol. "Guido Grandi" niv. Bologna* 52: 105-114.
- McBrien, H. L. & G. J. R. Judd. 1998. Forecasting emergence, flight, and oviposition of *Spilonota ocellana* (Lepidoptera: Tortricidae) in British Columbia. *Environ. Entomol.* 27: 1411-1417.
- McLaren, G. F., J. A. Fraser & D. M. Suckling. 1998. Mating disruption for the control of leafroller on apricots. *New Zealand J. Crop Hort. Sci.* 26: 259-268.
- McMillan, J. D., M. J. Anderson, E. E. Butin & E. R. Hart. 1998. Phenology and infestation patterns of the cottonwood twig borer (Lepidoptera: Tortricidae) in Iowa. *Great Lakes Entomol.* 31: 181-190.
- Mondy, N., P. Pracros, M. Fermaud, & M.-F. Corio-Costet. 1998. Olfactory and gustatory behaviour by larvae of *Lobesia botrana* in response to *Botrytis cinerea*. *Entomol. Exp. Appl.* 88: 1-7.
- Nasu, Y. & H. Kogi. 1998. *Eucosma abacana* (Erschoff) (Lepidoptera, Tortricidae) and its ally in Japan. *Japan. Heteroc. J.* (197): 356-359. [In Japanese]
- Nasu, Y. & H. Kogi. 1998. Discovery of *Eucosma brachysticta* Meyrick (Tortricidae) from Japan. *Japan. Heteroc. J.* (201): 13-15 [In Japanese]
- Nasu, Y. & Y. Kusunoki. 1998. One new and one newly recorded olethreutine moth (Lepidoptera, Tortricidae) from Japan. *Trans. Lepid. Soc. Japan* 49: 111-114.

- Navie, S. C., T. E. Priest, R. E. McFadyen & S. W. Adkins. 1998. Efficacy of the stem-galling *Epiblema strenuana* Walk. (Lepidoptera: Tortricidae) as a biological control agent for ragweed parthenium (*Parthenium hysterophorus* L.). Biol. Contr. 13: 1-8.
- Newcombe, R. D. & D. M. Gleeson. 1998. Pheromone evolution within the genera *Ctenopseustis* and *Planotortrix* (Lepidoptera: Tortricidae) inferred from a phylogeny based on cytochrome oxidase I gene variation. Biochem. Syst. Ecol. 26: 473-484.
- Palli, S. R., T. R. Ladd, A. R. Ricci, M. Priamvera, I. N. Mungrue, S. D. Prang & A. Retnakaran. 1998. Synthesis of the same two proteins prior to larval diapause and pupation in the spruce budworm, *Choristoneura fumiferana*. J. Ins. Physiol. 44: 509-524.
- Park, C. P., J. M. Gil, J.-W. Sung & D.-Y. Oh. 1998. A concise synthesis of the sex pheromone of *Phtheochroa cranaodes* (Lepidoptera: Tortricidae). Tetrahedron Lett. 39: 2583-2584.
- Park, S.-C. & S. P. Foster. 1998. Comparative sex pheromone-associated behavior of *Planotortrix notophaea* and *P. octo* (Lepidoptera: Tortricidae). J. Asia-Pac. Entomol. 1: 91-98.
- Patocka, J. 1998. Die Puppen der mitteleuropaischen Wickler. Lepidoptera: Tortricioidea, Tortricidae. Nova Suppl. Entomol. 12: 1-286.
- Pavan, F., V. Girolami & G. Sacilotto. 1998. Second generation of grape berry moths, *Lobesia botrana* (Den. and Schiff.) (Lep., Tortricidae) and *Eupoecilia ambiguella* (Hb.) (Lep., Cochylidae): spatial and frequency distribution of larvae, weight loss and economic injury level. J. Appl. Entomol. 22: 361-368.
- Pencheva, A. J., M. A. Subchev & S. Voerman. 1998. Seasonal flights of *Epiblema tedella* Cl. (Lepidoptera: Tortricidae) - investigations by pheromone traps in Bulgaria. Acta Zool. Bulgaria 50: 93-97.
- Pereyra, P. C. & N. E. Sanchez. 1998. Effects of different host-plant species on growth, development and feeding of bud borer, *Epinotia aporema* (Lepidoptera: Tortricidae) in La Plata, Argentina. Revta. Chil. Hist. Nat. 71: 269-275.
- Pisica, C. & A. Diaconu. 1998. The prime parasitoids of the Ichneumonidae (Hymenoptera) family obtained from tortricides (Lepidoptera: Tortricidae) injurious to fruit trees (I). Bull. Inform. Lepid. Roman. 8: 281-288.
- Powell, J. A. & J. W. Brown. 1998. A new species of *Decodes* from the Channel Islands and mainland of southern California (Lepidoptera: Tortricidae: Cnephasiini), Pan-Pac. Entomol. 74: 102-107.
- Pree, D. J., K. J. Whitty, L. Van Driel & G. M. Walker. 1998. Resistance to insecticides in Oriental fruit moth populations (*Grapholita molesta*) from Niagara Peninsula of Ontario. Canad. Entomol. 130: 245-256.
- Razowski, J. 1998. The genera of Tortricidae. Part III. Nearctic Chlidanotinae and Tortricinae. Acta Zool. Cracov. 41: 227-281.
- Regniere, J. & B. Cooke. 1998. Validation of a process-oriented model of *Bacillus thuringiensis* variety *kurstaki* efficacy against spruce budworm (Lepidoptera: Tortricidae). Environ. Entomol. 27: 801-811.
- Regniere, J. & P. Duval. 1998. Overwintering mortality of spruce budworm, *Choristoneura fumiferana* (Clem.) (Lepidoptera: Tortricidae) populations under field conditions. Canad. Entomol. 130: 13-26.
- Robinson, D. J., L. P. Abrahamson, K. F. Raffa & E. H. White. 1998. Spruce budworm (Lepidoptera: Tortricidae) field fecundity: new insights into its estimation and use. For. Ecol. Mgmt. 106: 73-81.
- Safonkin, A. F. 1998. Polymorphism and adaptation of *Archips rosana* (Scopoli, 1763) (Lepidoptera, Tortricidae) to different biotypes. Russian Entomol. J. 7: 83-88.

- Safonkin, A. F. & T. A. Triselva. 1998. Influence of food plants on the gut biology of *Archips rosana* (Lepidoptera, Tortricidae). Zool. Zhurn. 77: 696-700. [In Russian]
- Savopoulou-Soultani, M., P. G. Milonas & D. G. Stavridis. 1998. Role of availability of food to the adult *Lobesia botrana* (Lepidoptera: Tortricidae) in its reproductive performance. J. Econ. Entomol. 91: 1341-1348.
- Skryzypcynska, M., M. Kozial & M. Kosibowicz. 1998. Pheromone trapping of the spruce seed moth *Cydia strobilella* L. (Lep., Tortricidae) in southern Poland in 1996-1997. Anz. Schadlingsk. Pflanzenschutz Umweltschult 71: 96-99.
- Spitzer, K. & J. Jaros. 1998. *Argyroploce arbutella* (Tortricidae) associated with a montane peat bog in the Sumava Mountains, Czech Republic. Nota Lepid. 21: 283-289.
- Stuart, R. J. & S. Polavarapu. 1998. Oviposition preferences of the polyphagous moth *Choristoneura parallela* (Lepidoptera: Tortricidae): effects of plant species, leaf size, and experimental design. Environ. Entomol. 27: 102-109.
- Subchev, M. A., A. J. Pencheva & S. Voerman. 1998. Sex attractant for *Cnephasia oxycanthana* (Herrich-Schaeffer) (Lepidoptera: Tortricidae). Acta Zool. Bulgaria 500: 99-102.
- Tominaga, S. 1998. The pupating habit of *Dactyloglypha tonica* (Meyrick) (Tortricidae). Japan. Heteroc. J. (199): 409. [In Japanese]
- Trematerra, P. & L. Aarvik. 1998. *Cydia johanssони* Aarvik and Karsholt, 1993 (Lepidoptera, Tortricidae), new for the Italian fauna, with description of the female. Boll. Zool. Agrar. Bachic. 30: 33-38. [In Italian]
- Trematerra, P. A. Sicarretta & P. Parenzan. 1998 [1997]. Faunistic notes on some interesting tortricid moths from southern Italy (Lepidoptera). Entomol. (Bari) 31: 181-189. [In Italian]
- Vickers, R. A., D. A. Ironside, S. McLean, A. Cotes & B. Camphill. 1998. Development of a pheromone-based monitoring system for the macadamia nut borer, *Cryptophlebia ombrodelta* (Lower) (Lepidoptera: Olethreutinae), in Australia. J. Asia-Pac. Entomol. 1: 85-89.
- Walters, B. D., P. J. Albert & R. Y. Zacharuk. 1998. Morphology and ultrastructure of sensilla of the proboscis of the adult spruce budworm, *Choristoneura fumiferana* (Clem.) (Lepidoptera: Tortricidae). Canad. J. Zool. 76: 466-479.
- Yasuda, T. 1998. The Japanese species of the genus *Adoxophyes* Meyrick (Lepidoptera, Tortricidae). Trans. Lepid. Soc. Japan 49: 159-173.

TORTRICIDAE BIBLIOGRAPHY FOR 1999

- Bloem, S., K. A. Bloem, J. E. Carpenter & C. O. Calkins. 1999. Inherited sterility of codling moth (Lepidoptera: Tortricidae): effect of substerilizing doses of radiation on insect fecundity, fertility, and control. Ann. Entomol. Soc. Am. 92: 222-229.
- Brown, J. W. 1999. *Dimorphopalpa*, a new genus of tortricid moths from Central and South America (Lepidoptera: Tortricidae: Euliini). Pan-Pac. Entomol. 5: 82-93.
- Brown, J. W. 1999. A new euliine genus from Costa Rica and Venezuela (Lepidoptera: Tortricidae: Euliini). J. New York Entomol. Soc. 106: 177-184.
- Brown, J. W. & S. E. Miller. 1999. A new species of *Ceolostathma* from Cocos Island, Costa Rica, with comments on the phylogenetic significance of abdominal dorsal pits in Sparganothini. Proc. Entomol. Soc. Washington 101: 701-707.
- Byun, B.-K. 1999. Eight newly recorded species of tribe Eucosmini (Lepidoptera: Tortricidae) from Korea. J. Asia-Pac. Entomol. 2(1): 19-25.

- Byun, B.-K. & C. H. Shin. 1999. *Eucoenogenes ancyrota* (Meyrick) (Lepidoptera: Tortricidae) attacking to *Ternstroemia japonica* Thunb. new to Korea. Korean J. Appl. Entomol. 38(1): 11-14.
- Chambon, J.-P., R. Mazel & S. Peslier. 1999. Les Tortricidae des Pyrenees-Orientales inventaire raisonne. Alexanor 20: 332-353.
- Cooke, B. J. & J. Regniere. 1999. Predictability and mesurability of *Bacillus thuringiensis* efficacy against spruce budworm (Lepidoptera: Tortricidae). Environ. Entomol. 28: 711-721.
- El-Sayed, A., M. Bengtsson, S. Raucher, J. Lofqvist & P. Witzgall. 1999. Multicomponent sex pheromone in codling moth (Lepidoptera: Tortricidae). Environ. Entomol. 28: 775-779.
- El-Sayed, A. J. Godde, P. Witzgall & H. Arn. 1999. Characterization of the pheromone blend of the grapevine moth, *Lobesia botrana*, by using flight track recording. J. Chem. Ecol. 25: 389-400.
- Evenden, M. L., G. J. R. Judd & J. H. Borden. 1999. Simultaneous disruption of pheromone communication in *Choristoneura rosaceana* and *Pandemis limitata* with pheromone and antagonist blends. J. Chem. Ecol. 25: 501-517.
- Gibeaux, C. A. 1999. Caracterisation de taxa inedites dans la famille des Tortricidae. Alexanor 20: 355-368.
- Horak, M. 1999. Torticoidea, pp. 199-215. In: Kristensen, N. (ed.), Handbook of Zoology (Berlin) 4(25).
- Kuznetsov, V. I. 1999. A brief key to the genera of the tortricid moths of the tribe Olethreutini from East Asia and first record of the subtribe Zomariina from Russia (Lepidoptera, Tortricidae). Entomol. Obozr. 78: 409-441. [In Russian]
- Landry, B. 1999. Quatre premieres mentions de Lepidopteres pour la province de Quebec (Opostegidae, Gelechiidae et Tortricidae). Faberies 24: 66-72.
- Landry, B., J. A. Powell & F. A. H. Sperling. 1999. Systematics of the *Argyrotaenia franciscana* (Lepidoptera: Tortricidae) species group: evidence from mitochondrial DNA. Ann. Entomol. Soc. Am. 92: 40-46.
- Miller, W. E. 1999. A new synonymy in *Dichrorampha* that reveals an overlooked immigrant for North America (Tortricidae). J. Lepid. Soc. 53: 74-75.
- Raman, A. & K. Dhileepan. 1999. Qualitative evaluation of damage by *Epiblema strenuana* (Lepidoptera: Tortricidae) to the weed *Parthenium hysterophorus* (Asteraceae). Ann Entomol. Soc. Am. 92: 717-723.
- Razowski, J. 1999. Tortricidae (Lepidoptera) from the Dominican Republic. Acta Zool. Cracov. 42: 307-319.
- Razowski, J. 1999. Tortricidae (Lepidoptera) from Ecuador. Acta Zool. Cracov. 42: 321-342.
- Razowski, J. 1999. Phylogeny for three Polyorthini genera of the Biclouncaria Razowski & Becker, 1993 group, with descriptions of new taxa. Acta Zool. Cracov. 42: 343-348.
- Razowski, J. 1999. Discovery of *Rhopobota* Lederer, 1859 (Lepidoptera: Tortricidae) in the Neotropical Region, with description of four new species. Acta Zool. Cracov. 42: 349-353.
- Razowski, J. 1999. Claspings structures of the valva in Tortricinae (Lepidoptera, Tortricidae) with the description of new Euliini genus. Misc. Zool. 22.1: 87-92.
- Razowski, J. 1999. Description of a new genus and six Neotropical species of Cochylini (Lepidoptera: Tortricidae), with some faunistic and variation data. Polskie Pismo Entomol. 68: 57-67.
- Razowski, J. 1999. Euliini (Lepidoptera: Tortricidae) of Chile. Polskie Pismo Entomol. 68: 69-90.
- Razowski, J. 1999. Synopsis of *Icteralaria* Razowski and *Netechma* Razowski (Lepidoptera: Tortricidae) with description of new taxa. Polskie Pismo Entomol. 68: 91-106.

- Razowski, J. 1999. Tortricidae of Korea; a faunistic and zoogeographical approach (Insecta: Lepidoptera). SHILAP Revta. Lepid. 27: 69-123.
- Razowski, J. 1999. Catalogue of the species of Tortricidae. Part V: Palearctic Eucosmina and Enarmoniina (Insecta: Lepidoptera). SHILAP Revta. Lepid. 27: 437-506.
- Razowski, J. & V. O. Becker. 1999. A review of the New World Chlidanotini (Lepidoptera: Tortricidae). Revta. Bras. Zool. 16: 1149-1182.
- Razowski, J. & V. O. Becker. 1999. Revision of the Neotropical genera *Seticosta* Razowski, 1986 and *Punctapinella* Brown, 1991 (Lepidoptera: Tortricidae) with description of one new genus and nine new species. Polskie Pismo Entomol. 68: 415-430.
- Razowski, J. & V.O. Becker. 1999. Notes on *Deltobathra* Meyrick, 1923 and *Ecnomiomorpha* Obraztsov, 1959 (Lepidoptera: Tortricidae), with description of new taxa. Acta Zool. Cracov. 42: 297-306.
- Razowski, J. & V. O. Becker. 1999. Description of new Neotropical Euliini genera (Lepidoptera: Tortricidae) and their species. Polskie Pismo Entomol. 68: 407-414.
- Razowski, J. & P. Trematerra. 1999. Description of new species of Italian *Cnephasia* Curtis, 1826, from Mount Etna, with notes on the cnephasiine ovipositor (Lepidoptera: Tortricidae). Boll. Zool. Agrar. Bachic., ser. II, 31(1): 11-15.
- Retnakaran, A., W. L. Tomkins, M. J. Primavera & S. R. Palli. 1999. Feeding behavior of the first-instar *Choristoneura fumiferana* and *Choristoneura pinus pinus* (Lepidoptera: Tortricidae). Canad. Entomol. 131: 79-84.
- Rubinoff, D. & J. Powell. 1999. Description of *Diedra*, new genus (Lepidoptera: Tortricidae: Tortricinae), and three new species, based on phylogenetic analysis. Ann. Entomol. Soc. Am. 92: 473-487.
- Ruiyan, M., H. Guibiao & L. Lianchang. 1999. The field trap test of *Ancylis sativa* Liu male moths to synthetic pheromone. Sci. Silv. Sinica 35: 126-128.
- Trematerra, P. 1999. Two new tortricids for the European fauna, *Aethes rubiginana* (Walsingham, 1903) and *Osthelderiella amardiana* Obraztsov, 1961, found in Italy (Lepidoptera: Tortricidae). Boll. Zool. Agrar. Bachic., ser. II, 31(1): 87-91.
- Trematerra, P. & A. Sciarretta. 1999. *Eucosma scorzonera* (Benander, 1942), new for the Italian fauna and interesting Olethreutinae from Central-Southern Italy (Lepidoptera, Tortricidae). Frustula Entomol. n.s. XXI (XXXIV): 1-7. [In Italian]
- Trematerra, P. & A. Sciarretta. 1999. Record of *Archicnephasia hartigi* Razowski, 1983, and *Eucosma gradensis* (Galvagni, 1909) with description of the females (Lepidoptera: Tortricidae). Boll. Lab. Entomol. Agrar. Filippo Silvestri 55: 53-59. [In Italian]
- Trematerra, P. S. Bella, P. Russo & A. Sciarretta. 1999. Contribution to knowledge of the Microlepidoptera fauna of Sicily, III. Tortricid moths from Pantano Longarini with record of *Cydia multistriana* (Chretien, 1915), new for the European fauna. Boll. Acc. Gioenia Sci. Nat., Catania (in press). [In Italian]