

ODONATOLOGICAL ABSTRACTS

1980

- (9774) GREGORI, J., 1980. *Zelenci, izvir Save Dolinke*. – [Zelenci, the source of the Sava Dolinka River]. Zavod za varstvo naravne in kulturne dediščine, Ljubljana. 30 pp. – ISBN none. – [Kultumi in naravni spomeniki Slovenije, No. 97]. (Slovene). – Price: SIT 95.- net. – (Slovene Mus. nat. Hist., Prešernova 20, P.O. Box 290, SLO-61001 Ljubljana, Slovenia).
A preliminary ed. of the "monograph" listed in OA 9859. It contains only a general reference to the occurrence of odon. larvae. – For details on the locality and its odon. fauna cf. also OA 9872.

1981

- (9775) RUSSEV, B.K., J.I. UZUNOV, S.G. KOVACHEV, I.Y. YANEVA & L.S. IVANOVA, 1981. Tendencies of the changes in the saprobic conditions of the Maritsa river. *Hidrobiologiya, Sofia* 14: 51-64. (Bulg., with Russ. & Engl.s's). – (Authors' addresses not stated).
5 odon. spp. are considered; Maritsa R., Bulgaria.
- (9776) UZUNOV, J.I. & S.G. KOVACHEV, 1981. The effect of the substrate on the structure of the macrozoobenthic communities in the Maritsa river. *Hidrobiologiya, Sofia* 14: 65-74. (Bulg., with Russ. & Engl.s's). – (Authors' addresses not stated).
Calopteryx splendens and Onychogomphus forcipatus are mentioned; Maritsa R., Bulgaria.
- (9777) UZUNOV, J.I., B.K. RUSSEV, S.G. KOVACHEV & I.Y. YANEVA, 1981. Species composition and distribution of the macrozoobenthos of the Maritsa river. *Hidrobiologiya, Sofia* 14: 3-15. (Bulg., with Russ. & Engl.s's). – (Authors' addresses not stated).

8 odon. spp. are recorded from the Maritsa R., Bulgaria.

1984

- (9778) NAVIGLIO, L., 1984. Aspetti naturalistici del Lago Pantaniello. *Natura & Montagna* 21(3): 49-57. – (Centro Stud. Ecol. Appenninici, Parco Naz. d' Abruzzo, I-67032 Pescasseroli).
Enallagma cyathigerum, Libellula quadrimaculata and Sympetrum fonscolombii are reported from this small lake (alt. 1818 m) in the Marsica Mts, Italy.

- (9779) VERENINI, M., 1984. Il biotope delle "zone umide" di Karlenmoos e Karlenteich. *Natura & Montagna* 21(1): 67-74. – (Via Warthema 3/2, I-40137 Bologna).
A general note on the flora and fauna of a small bog and a temporary pond (alt. ca 570 m) nr Monticolo, Bolzano, Italy. The odon. spp. listed are Lestes sponsa, L. virens, Coenagrion puella, Ischnura elegans, Aeshna juncea, Anax imperator, Libellula depressa, Sympetrum sp.

1985

- (9780) JANEVA, I.J. & B.K. RUSSEV, 1985. Trends in changes of the hydrobiological and saprobiological state of the Tundža river. 2. May-November 1981. *Hidrobiologiya, Sofia* 26: 15-36. (Bulg., with Russ. & Engl.s's). – (Authors' addresses not stated).
Lists 5 identified odon. spp.; Tundzha R., Bulgaria.
- (9781) THOMES, A., 1985. *Ökologische Beobachtungen an den Libellen (Odonata, Insecta) des Unteren Schierenseebaches (Naturpark Westensee, Schleswig-Holstein)*. DiplArb. Zool. Inst. Univ. Kiel. iv+112

pp., App. excl. – (In de Grund 5, D-24796 Bovenau). The main results of this work were reported in the paper as listed in OA 6567.

1986

- (9782) ØKLAND, J. & K.A. ØKLAND, 1986. The effects of acid deposition on benthic animals in lakes and streams. *Experientia* 42: 471-486. – (Div. Limnol., Dept Biol., Univ. Oslo, P.O. Box 1027, Blindern, N-0315 Oslo-3).

This is an excellent review of the situation in Europe and Canada. It contains several references to the Odon., and a very comprehensive bibliography.

1988

- (8783) SANSONI, G., 1988. Storia ecologica e diversità biologica: macroinvertebrati bentonici in un bacino Tosco/Ligure (F. Magra). *Boll. Mus. Stor. nat. Lunigiana* 6/7: 255-259. (With Engl.s.). – (Servizio Nazionale Prevenzione USL n. 2, Via del Patriota 2, Massa, Italy).

The hydrographic system of the Magra R. (Tuscany, Italy) appears well preserved and it harbours a rich invertebrate fauna. The odon. are reported on the generic level only, viz. Calopteryx, Platycnemis, Cercion, Ischnura, Onychogomphus, Ophiogomphus, Cordulegaster. – (*Abstracter's Note*: The identification of Ophiogomphus should be checked, since its populations in Italy are somewhat rare, have a northern distribution, and were so far not recorded from Tuscany).

- (9784) THANGAM, T.S. & K. KATHIRESAN, 1988. Studies on the mosquito larval predation by dragonfly nymph. *Proc. Int. Conf. "Biol. Control of Vectors with predaceous Arthropods", Madras [Bicovas] 2*: 59-65. – (Cent. Adv. Stud. Marine Biol., Annamalai Univ., Parangipettai-608 502, India). The predation of larval *Brachythemis contaminata* on *Aedes aegypti* larvae was studied with reference to the satiation time, maximum food intake, predatory efficiency and the effect of deprivation time. The utility of dragonfly larvae in the mosquito biological control is briefly discussed.

1990

- (9785) BATTEGAZZORE, M., 1990. Qualità dell'acqua e macroinvertebrati in un ambiente fluviale. *Acqua-*

Aria 7/8: 573-580. (With Engl.s.). – (Ist. Ecol., Univ. Parma, Viale delle Scienze, I-43100 Parma).

11 odon. spp., incl. *Boyeria irene* and *Somatochlora metallica*, are listed from the Po R. and 2 of its tributaries in the Nature Reserve "Garzaia di Valenza" (alt. 87-93 m), Piedmont, Italy.

- (9786) DRESCHER, D., 1990. Ökologische Untersuchungen an neuangelegten perennierenden Kleingewässern auf einer sauren Abraumkippe im Braunkohletagebauegebiet Borken/Nordhessen. *Mitt. Ergänzungsstud. ökol. Umweltsicherung* 17: 1-140, Appendix excl. – (Martin-Luther-Str. 139, D-37081 Göttingen).

Contains an annotated list of 20 odon. spp., with a brief discussion of the encountered assemblage.

1991

- (9787) DESTEFANIS, M. & I. PAVIGNANO, 1991. Una prima valutazione dello stato di conservazione di ambienti palustri attraverso l'analisi di comunità macrobentoniche. *Acqua-Aria* 6: 571-575. (With Engl.s.). – (Dipto Biol. Anim., Univ. Torino, Via Accademia Albertina 17, I-10123 Torino). Samples were collected at 16 localities in the Anfiteatro Morenico di Ivrea, Torino, Italy. Dragonflies are listed at the family level only.

- (9788) DRAGON-SLAYER'S NEWSLETTER. [*Newsletter of the Ohio Dragonfly Survey*], Columbus, Vol. 1 (1991), No. 1 (June), No. 2 (Sept.). Edited by B. Glotzhober. – (Editor: Ohio Hist. Soc., 1982 Velma Ave., Columbus, OH 43211-2497, USA). Under this name, the first 2 vols were published (for Vol. 2 cf. OA 6792), whereafter the title of the newsletter has been changed (cf. OA 9801). Its objective is to facilitate the communication among the collaborators of the Ohio Dragonfly Survey, set up and conducted by the Editor. – **C o n t e n t s**: (No. 1): [Glotzhober, B.]: Editorial (pp. 1-2; with the appended list of collaborators). – (No. 2): [Glotzhober, B.]: [various notes under the heading]: "The 1991 season", "Recording existing collections", "Reports generated", "Recruit for the Ohio Dragonfly Survey", "Time of day for collecting?", "Training experience" (pp. 1-3); – Cook, C.: American Dragonfly Society (p. 3); – Heady, S.E.: Adventures in aquatic entomology (pp. 4-6).

1992

- (9789) ABBINGH, G. & W. VAN MANEN, 1992. Verdwaaide roodpootvalken *Falco vesperinus* en libellen Odonata in het voorjaar van 1992. – Strayed Red-footed Falcons *Falco vesperinus* and dragonflies Odonata in spring 1992. *Drentse Vogels* 5: 35-36. (Dutch, with Engl.s.). – (First Author: Muddegoorn 78, NL-9403 NL Assen).
Adult *Libellula quadrimaculata*, *Leucorrhinia dubia* and *L. rubicunda* are reported the prey. The pellets contained also the remains of not identified Zygoptera. Balooërveld, the Netherlands.
- (9790) [AKRAMOWSKI, N.N.] ARUTYUNOVA, L.D. & A.E. TERTERYAN, 1992. Pamyati Nikolaya Nikolaevicha Akramovskogo (1906-1991). – [In memory of Nikolai Nikolaevich Akramowski (1906-1991)]. *Biol. Zh. Armen.* 45(2): 179-180, portrait incl. (Russ.). Obituary, with a brief outline of his life and work. The exact date of his death is not stated. For details on his manifold odonatol. activities and services cf. *Odonatologica* 5(1976): 309-312.
- (9791) CARNELUTTI, J., 1992. Pregled metuljarske dejavnosti na Dolenjskem. – Lepidopterologische Untersuchungen in Dolenjska. *Dolenjski Zborn.* 4: 133-144. (Slovene, with Germ.s.). – (Inst. Biol., Slovene Acad. Sci. Arts, Novi trg 5, SLO-61000 Ljubljana).
Contains a reference to the entomological work of Mate Hafner (1865-1946), a Notary Public in Ljubljana and in various other Slovene cities, of whom it is said he was collecting all aquatic insect orders in Slovenia. – (*Abstracter's Note*: A small, poorly preserved odon. collection, containing ca 40 specimens from Ljubljana, Laverca, the Sorško Lowlands, Bohinj, etc. (ca 1915-1934) is in Inst. Biol., Slovene Acad. Sci. & Arts, Ljubljana. The inventory is under preparation by M. Kotarac).
- (9792) DRAGON-SLAYER'S NEWSLETTER. [*Newsletter of the Ohio dragonfly Survey*], Columbus, Vol. 2 (1992), No. 1 (Jan.), No. 2 (July), No. 3 (Nov.). – (c/o B. Glotzhober, Ohio Hist. Soc., 1982 Velma Ave., Columbus, OH 43211-2497, USA).
(No. 1): *Alrutz, B.*: Dragonfly feeding frenzy (pp. 2-3); – *Case, D.S.*: Migrating swarm (p. 3); – *Glotzhober, B.*: Stinging dragonflies (p. 3); – several anonymous notes. – (No. 2): *Hubbard, J.*: The Rainbo Person News Digest (p. 2; reporting on the work on mosquito control by *Crocothemis servilia* in Burma, as originally published in the paper listed in *OA* 3195); – various, mostly anonymous minor notes, incl. annotations on the Ohio status of 6 very rare Ohio spp. (pp. 2-3). – (No. 3): All notes are *anonymous*, incl. a list of the 1992 migration observations, recorded by *L. McConnell, B. Glotzhober* and *D. Case* (p. 2).
- (9793) HARGEBY, A., R.C. PETERSEN, A. KULLBERG & M. SVENSSON, 1992. Benthic macroinvertebrates along the soil/water interface of the Humex lake 1989-1991. *Environment internat.* 18: 659-666. – (Limnol. Inst., Univ. Lund, S-22100 Lund).
The taxonomic composition, abundance and size distribution of benthic invertebrates were studied at the soil/water interface 2 yr before and the first yr after the start of artificial acidification of a small catchment and its humic lake, the geographic location of which [somewhere in Sweden?] is not stated. The odon. were throughout the most abundant group. *Coenagrion hastulatum*, *Aeshna grandis* and *A. juncea* are considered. Significant differences between years indicate that size distribution could be used to detect altered growth conditions.
- (9794) ORTAZ, M., 1992. Hábitos alimenticios de los peces de un río de montaña neotropical. *Biotropica* 24(4): 550-559. (With Engl.s.). – (Esc. Biol., Fac. Cien., Univ. Central Venezuela, Aptdo 47114, Caracas, Venezuela).
The diet of the common Rio Limón fish spp. (Henri Pirtier National Park, Venezuela) is briefly described. The odon. are listed for the characids *Creagrutus beni* and *Hemibrycon dentatus* (cumulative figures, no specific names).
- (9795) PITZKE-WIDDIG, C., 1992. *Ökologische Untersuchungen an temporären Gewässern in Südafrika und Argentinien unter besonderer Berücksichtigung der Odonata*. Inaug.-Diss. Philipps-Univ., Marburg/Lahn. vi+175 pp., Appendices excl. – (Ederstr. 1, D-35274 Kirchhain).
The published summary of this work is listed in *OA* 9672. – As far as Argentina is concerned, this is a pioneer work on the composition, ecology and trophic relationships of the odon. fauna of temporary ponds. In S. Africa the notes on this subject are also rare and far apart. Of particular interest is also the comparison between the African and S American faunal assemblages in this type of habitat, and which exhibit several amazing taxonomic (and other) similarities.
- (9796) WOIKE, M., 1992. Entwicklung eines gross-

flächigen Feuchtgebietes an der Ems bei Steinhorst im Kreis Paderborn. In: D. Mues, [Ed.], Bio-topflege, Biotopentwicklung, Vol. 2, pp. 40-50, Forschungsges. Landschaftsentw., Troisdorf, ISBN 3-88579-097-1. – (Landesamt Agrarord., Postfach 4667, Moltkestr. 18, D-48151 Münster).
Contains an annotated list of 23 odon. spp. from the Steinhorster Becken Nature Reserve, Paderborn distr., Northrhine-Westphalia, NW Germany.

1993

- (9797) AHRENS, B., 1993. Libellen. In: M. Gödde, W. Schwöppe & H. Terlutter, [Eds], Feuchtwissenschaft im westlichen Münsterland: Das Naturschutzgebiet Ellewicker Feld, pp. 78-83, Biol. Statn Zwillbrock, Vreden, ISBN 3-926211-02-4. – (Publishers: Zwillbrock 10, D-48691 Vreden).
From the Ellewicker Feld Nature Reserve, Münsterland, NW Germany, 15 spp. are listed and 3 different odon. communities are described.
- (9798) AUBRECHT, G., 1993. [Nachruf]. W. Hofrat Dr. Gerald Mayer. *Jb. oberösterr. Musealver.* 138(1): 337-345, portrait incl. – (Author's address not stated).
An exhaustive biography and a complete bibliography (born & deceased in Linz, Austria; 2 July 1926 - 29 Sept. 1992). In 1952 he graduated at the Univ. of Graz with a PhD thesis, "Verhaltensstudien an Odonaten", an important, but little known work from the pioneer days of experimental studies on odon. behaviour. During 1957-1961 he produced 4 odonol. publications, but devoted the rest of his work almost entirely to ornithology.
- (9799) CARAVAGGI, G., A. OCCHIPINTI AMBROGI & C. PEZZOTTA, 1993. Dinamica dei popolamenti macrobentonici su diversi substrati vegetali in una lanca di Po. *Mem. Soc. ticin. Sci. nat.* 4: 205-217. (With Engl.s.). – (Centro Interuniv. Ecol. Acque Interne, Univ. Pavia, Piazza Botta 10, I-27100 Pavia).
During May 1988-Dec. 1989, monthly samples were taken of macrobenthos associated with different aquatic vegetation in an oxbow of the Po R., Pavia prov., Italy. 16 odon. spp. are listed. – (*Abstracter's Note*: *Coenagrion caeruleum*, *C. mercuriale* and *C. scitulum* were not previously reported from Lombardy. Until confirmed, the records should be considered with caution).
- (9800) COMBY, B., 1993. *Köstliche Insekten. Die Proteine der Zukunft, unerschöpfliche Quelle für die gesunde Ernährung*, Eichborn, Frankfurt/Main. 152 pp. ISBN 3-8218-0427-0. – Price: NLG 32.- net.
Authors objective is promotion of the use of insects as human food. In a table, where the palatability of various insects is graded from "-5" (=very unpleasant) to "0" (=tasteless) and "5" (=delicious), an adult anisopteran from Morocco is assigned a "2".
- (9801) *The DRAGON-FLIER. Newsletter of the Ohio Dragonfly Survey*, Columbus, Vol. 3 (1993), No. 1 (Jan.), No. 2 (May), No. 3 (Nov.). – (c/o B. Glotzhober, Ohio Hist. Soc., 1982 Velma Ave., Columbus, OH 43211-2497, USA).
This is the continuation of the *Dragon Slayer's Newsl.* (cf. OA 9788, 9792). – (No. 1) contains state records for *Libellula deplanata* and *Ischnura kellicotti* (p. 1), the season summary and database totals (p. 2), and various other anonymous notes. – (No. 2): *anonymous* notes, incl. the schedule of a workshop and various bibliographic data. – (No. 3): *anonymous* notes on *Somatochlora hineana* [in Illinois], *Macromia wabashensis* and *Nannothemis bella* (pp. 1-2), a review of Ohio swarms (Aug. 25-Oct. 3) (p. 3), etc.
- (9802) ESQUIVEL, C., 1993. *Schlüssel zur Bestimmung der in Mexiko und Zentralamerika vorkommenden Libellenfamilien (Insecta: Odonata)*. Ihssen, Hamburg. ii+14 pp. (With Engl.s.). – Price: DEM 7.50 net. – (Orders to: G. Ihssen, Heisterkamp 18, D-22339 Hamburg).
A German edition (translated and provided with a Preface by G. Ihssen) of the paper listed in OA 8361. The attractive, commercially produced booklet (A5 size), was published in 100 copies. The confusion in fig. numbering in the original publication is here corrected.
- (9803) GUSENLEITNER, F., 1993. Entomologische Arbeitsgemeinschaft: Jahresbericht 1991, 1992. *Jb. oberösterr. Musealver.* 138(2): 41-78. – (Author's address not stated).
Contains records of 8 odon. spp. from various localities in Upper Austria.
- (9804) HELLMUND, M. & W. HELLMUND, 1993. Neufund fossiler Eilogen (Odonata, Zygoptera, Coenagrionidae) aus dem Oberoligozän von Rott im Siebengebirge. *Decheniana* 146: 348-351. (With Engl.s.). – (First Author: Geseltalmus., Martin-Luther Univ., Domstr. 5, D-06108 Halle/Saale).

Detailed description and illustrations of fresh odon. egg material, from the same locality as published earlier; cf. OA 8495.

- (9805) IHSSSEN, G., 1993. Vorwort des Übersetzers. In: C. Esquivel, Schlüssel zur Bestimmung der in Mexico und Zentralamerika vorkommenden Libellen (Insecta: Odonata), p. 1, Ihssen, Hamburg. – (Heisterkamp 18, D-22339 Hamburg).
Preface in the work listed in OA 9802.
- (9806) JUNGSMANN, E. & W. SYKORA, 1993. Zur Entwicklung der Libellenfauna (Odonata) im Naturschutzgebiet Tagebaurestloch Zechau. *Mauritiana* 14(2): 144-147. – (First Author: Kanalstr. 35, D(O)-7400 Altenburg/Thür).
The development of the odon. fauna of the "Tagebaurestloch Zechau", Altenburg distr., Thüringen, E Germany, is traced year-wise for the period, 1980-1992. Detailed annotations on the annual abundance of 26 spp. are supplied. – For another paper on this locality cf. AO 8078.
- (9807) KIPPING, J., 1993. Bemerkenswerte Libellenbeobachtungen (Odonata) in der Umgebung Altenburgs. *Mauritiana* 14(2): 143-144. – (Frauengasse 27, D(O)-4700 Altenburg/Thür).
Annotations on the occurrence of 5 spp.; Altenburg, Thüringen, E Germany.
- (9808) MASTELLER, E.G., 1993. Odonata (dragonflies and damselflies) of Presque Isle State Park, Erie county, Pennsylvania, *J. Pa Acad. Sci.* 67(3): 137-140. – (Div. Sci., Behrend Coll., Pennsylvania St. Univ., Station Rd, Erie, PA 16563-0203, USA).
The status of the regional odon. fauna is reviewed for the period, 1902-1992, during which 50 spp. were recorded. Of these, 16 spp. may be at present extirpated.
- (9809) MOL, J.H.A., 1993. Aquatic invertebrates of the Central Plains. In: P.E. Ouboter, [Ed.], The freshwater ecosystems of Suriname, pp. 113-131, Kluwer, Dordrecht-Boston-London, ISBN 0-7923-2408-0 [*Monogr. biol.* 70]. – (CELOS, Univ. Surinam, P.O. Box 9212, Paramaribo, Surinam).
The composition and standing stock of aquatic invertebrates of the Coastal Plain of Surinam are discussed (alt. 0-11 m, surface 18.000 km²). An attempt is made to characterize the fauna of the 3 main habitats (bottom, water column, floating vegetation) and to evaluate the impact of the rain-induced seasonal cycle of high-water and low-water periods on the invertebrate standing stock. In an appendix, a checklist of 40 regional odon. taxa (mostly identified to sp.) is presented. – For the list of odon. larvae identified by D.C. Geijskes, cf. J. Van der Land, 1970, *Zool. Bijdr.* 12: 3-46, pls 1-6 excl.
- (9810) MOL, J.H.A., 1993. Structure and function of floating bubble nests of three armoured catfishes (Callichthyidae) in relation to the aquatic environment. In: P.E. Ouboter, [Ed.], The freshwater ecosystems of Suriname, pp. 167-197, Kluwer, Dordrecht-Boston-London, ISBN 0-7923-2408-0 [*Monogr. biol.* 70]. – (CELOS, Univ. Surinam, P.O. Box 9212, Paramaribo, Surinam).
Quantitative data on the occurrence of (not further identified) odon. larvae in the nests of *Hoplosternum littorale*; Surinam.
- (9811) MOODY, D., 1993. Take flight with dragons and damsels. *Sci. & Children* 1993 (May): 12-15. – (Dept Biol., Univ. Findlay, Findlay, OH 45840, USA).
Various suggestions for teachers' or youth leaders' dragonfly work with children. – Cf. also OA 6903, 7695, 9857.
- (9812) MÜLLER, J. & S. WALTER, 1993. [Der Naturraum Drömling]. Die Insekten. *NatSchutz Land Sachsen-Anhalt* 30 (Sonderh.): 41-46. – (First Author: Pablo-Neruda-Str. 9, D-39126 Magdeburg).
48 odon. spp. were evidenced in the Drömling area, Sachsen-Anhalt, E Germany. A list is not given, but most of the spp. are mentioned and the significance of their local occurrence is stated.
- (9813) NISLOW, K.H. & M.C. MOLLES, 1993. The influence of larval case design on vulnerability of *Limnephilus frijole* (Trichoptera) to predation. *Freshw. Biol.* 29: 411-417. – (First Author: Dept Biol. Sci., Dartmouth Coll., Gilman Hall, Hanover, NH 03755, USA).
The potential selective pressures exerted by the minnow (*Gila pandora*) and the larval *Oplonaeschna armata* were examined in a series of laboratory experiments. The cases of Trichoptera larvae surviving exposure to either dragonfly or fish were significantly stronger and wider, and also (marginally significantly or not significantly) longer and with a greater mineral fraction than those of victims.

- (9814) NOVELO-GUTIERREZ, R., 1993. La nayade de *Pseudostigma aberrans* Selys, 1860 (Odonata: Zygoptera: Pseudostigmatidae). *Fol. ent. mex.* 87: 55-60. (With Engl.s.). – (Biosist. Ins., Inst. Ecol., Aptdo Postal 63, MX-91000 Xalapa, Veracruz).
The ultimate instar is described, figured, and compared with *Mecistogaster modesta* and *Megaloprepus caerulatus*.
- (9815) POLHEMUS, D.A., 1993. Damsels in distress: a review of the conservation status of Hawaiian Megalagrion damselflies (Odonata: Coenagrionidae). *Aquat. Conserv. marine freshw. Ecosyst.* 3: 343-349. – (Dept Ent., Bishop Mus., P.O. Box 19000-A, Honolulu, HI 96817, USA).
The genus *Megalagrion* as presently interpreted contains 23 spp. and 5 spp., all confined to the Hawaiian Islands. Based on current surveys, 23 of these 28 taxa are still extant, although 2 lowland spp., *M. xanthomelas* and *M. pacificum*, appear to be extirpated from certain islands that formerly constituted portions of their original ranges. – Of the 5 taxa not yet rediscovered, 3 (*M. williamsoni*, *M. amaurodytum fallax* and *M. amaurodytum waianaeum*) are of questionable taxonomic validity, and the remaining 2 (*M. jugorum* and *M. molokaiense*) are rare and ecologically specialized spp. that do not occur near the typical aquatic damselfly habitats most frequently surveyed by collectors. – The current major threats to *Megalagrion* are competition and predation from introduced fish, frog and invertebrates and physical destruction of habitats, particularly on the island of Oahu. – Cf. also OA 8970.
- (9816) PRENDERGAST, J.R., S.N. WOOD, J.H. LAWTON & B.C. EVERSHAM, 1993. Correcting for variation in recording effort in analyses of diversity hotspots. *Biodiversity Letters* 1: 39-53. – First 3 Authors: NERC Cent. Pop. Biol., Imp. Coll. at Silwood Park, Ascot, Berks, SL5 7PY, UK).
Interpretation of large-scale faunal and floral data is often frustrated by the bias caused by variation in recording intensity. Using distribution data for Odon. and Hepaticae, a technique for correcting this bias is described. The method is used to locate species-rich hotspots for the 2 taxa and comparisons are made with uncorrected data.
- (9817) SINHA, K.K. & D.K. SINHA, 1993. Observation on macrophytes associated benthic macrofauna in some fresh water ponds of Munger (Bihar) [sic!].
J. Ecobiol. 5(2): 89-93. – (Dept Zool., Bhagalpur Univ., Bhagalpur-811202, India).
The macroinvertebrate communities associated with *Potamogeton crispus*, *Hydrilla verticillata* and *Eichhornia crassipes* were studied in some eutrophic ponds in Feb.-March, 1990. 4 odon. spp. are listed.
- (9818) STEWART, D. & M.J. SAMWAYS, 1993. Delicate detectors of riverine disturbance. *Conserva* 1993 (March/April): 6-7. – (Second Author: Dept Zool. & Ent., Univ. Natal, P/Bag X01, Pietermaritzburg, Scottsville 3209, RSA).
Sampling adult Odon. on 4 South African rivers (the Sabie, Crocodile, Olifants and the Letaba R.), all in the southern sector of the Kruger National Park, has been found to provide a quick and inexpensive tool for detecting environmental disturbances or changes in the river systems. By studying the species composition of a river and relating each sp. to its preferred habitats, it is possible to establish the overall characteristics of a river. Combining this with the diversity of the spp, the disturbance on the river can be gauged.
- (9819) TOMBO TO BUNKA – [DRAGONFLY KINGDOM NEWSLETTER], Nakamura, Nos 48 (Aug. 30, 1993), 49 (Oct. 30, 1993), 50 (Dec. 30, 1993). (Jap.). – (c/o Ms M. Tanimoto, Coordinator for International Relations, Shimanto Tombo Shizenkan, 8055-5 Gudoh, Nakamura-shi, Kochi-ken, 787, JA).
The newsletter is published by, and supplied free to the members of the "Society of Dragonflies and Nature", Nakamura; it is directed at the general "dragonfly fans" and mainly deals with topics related to the Shimanto Dragonfly Sanctuary & Museum at Nakamura, Japan (cf. e.g. OA 7424). Each issue has 12 pp. and a frontispiece dragonfly portrait. Among the articles in the present set are those on "Toriko" (in all 3 issues, by *Y. Hatto*), a note on *Hydrobasileus croceus* (No. 48, *anonymous*), a report on the visit to the Sanctuary by the participants at the 12th Int. Symp. Odonatol. (No. 49, by *M. Sugimura*), a note on the *Libellula angelina* habitat in Kobe (No. 50, by *I. Oka*), etc.
- (9820) UNRUH, M., 1993. Kleine Königlibelle, *Anax parthenope* Selys, 1839 – Beobachtungen in Thüringen. *Mauritiana* 14(2): 147-148. – (Max-Planck-Str. 11, D(O)-4900 Zeitz).
Commented 1990 and 1991 records from the districts of Altenburg and Zeitz, Thüringen, E Germany.

- (9821) WASSCHER, M., 1993. Dragonflies of black-water creek system. In: P.E. Ouboter, [Ed.], The freshwater ecosystems of Suriname, pp. 157-166. Kluwer, Dordrecht-Boston-London, ISBN 0-7923-2408-0 [*Monogr. biol.* 70]. – (Minstraat 15 bis, NL-3582 CA Utrecht).
The distribution/zonation of 47 spp., as evidenced during a 2-week field work in the Surinam interior, is outlined and the species habitat selection is discussed.
- (9822) WOLF, L.L. & E.C. WALTZ, 1993. Alternative mating tactics in male white-faced dragonflies: experimental evidence for a behavioural assessment ESS. *Anim. Behav.* 46(2): 325-334. – (Dept Biol., Syracuse Univ., Syracuse, NY 13244-1270, USA).
Locations of artificial perches were manipulated relative to oviposition substrate to test whether the maintenance of discrete, daily alternative mating tactics, either territorial defence or wandering to encounter reproductively active females, among a population of male white-faced dragonflies, *Leucorrhinia intacta*, was better described by a mixed ESS (probability of tactic use fixed in ecological time) or behavioural assessment ESS (probability of tactic use varies with environmental conditions) model. Females responded to the manipulations by ovipositing significantly more frequently in areas with good oviposition substrate. Territorial males settled where artificial perches occurred, but preferred perches in areas with good oviposition substrate. Sequential daily manipulation of perch position produced significant effects on tactic frequency. A significantly lower proportion of the male population exhibited territoriality when perches were not in areas with good oviposition substrate than when perches were either in areas all with good substrate or equally distributed between areas with and without good substrate. Tactic frequencies did not differ significantly between the latter two experimental configurations. Average reproductive success, measured as eggs laid by females mated to males using each tactic, generally was not statistically different within experimental treatments. The data support a changing probability of using a tactic (behavioural assessment ESS) and not a fixed probability (mixed ESS). It is hypothesized that natural variation in availability of perches and substrate, even within the short adult life of these dragonflies, selects for flexibility of tactic choice by individual males. Mechanisms of assessment and the factors producing negative frequency dependence of payoffs to one or both tactics are unknown at present.
- (9823) ZIMMERMANN, W., 1993. Libellen (Odonata). In: R. Bellstedt, [Ed.], Check-Listen Thüringer Insekten, Vol. 1, pp. 9-10, Thüring. Entomologenverband & Thüring. Landesanstalt f. Umwelt, Jena. – (von-Hoff-Str. 31, D-99867 Gotha).
A briefly annotated checklist of 54 spp.; Thüringen, Germany.
- 1994**
- (9824) ADOMSENT, M., 1994. Zur Libellenfauna einiger Seen und Teiche im südöstlichen Schleswig-Holstein. *Bombus* 3(11/12): 43-47. – (Drosselweg 3, D-21403 Wendisch Evern).
Contains brief descriptions and annotated lists of odon. assemblages in 14 lakes and ponds; SE Schleswig-Holstein, Germany.
- (9825) AHMAD, A., 1994. *Taxonomic studies on Anisoptera of North-West Frontier Province*. M.Sc. thesis, Univ. Agric., Faisalabad. vi+76 pp., map incl. – (c/o Dr A. Khaliq, Dept Ent., Univ. Coll. Agric., Rawalakot, AK, Pakistan).
21 spp. and ssp. were studied from Abbottabad, Shinkiar, Batgram, Kalam, Bahrain, Peshawar, Mingora, Mardan, Kohat, Jamrud, D.I. Khan, Tarbela and Thandiani, all NW Frontier Prov., Pakistan. *Macromia cingulata* is for the first time recorded from Pakistan. Descriptive notes and annotations are provided for all spp., and structural figs for most of them.
- (9826) ALCOCK, J., 1994. Postinsemination associations between males and females in insects: the mate-guarding hypothesis. *A. Rev. Ent.* 39: 1-21. – (Dept Zool., Arizona St. Univ., Tempe, AZ 85287-1501, USA).
An updated review, beginning with a description of the diversity of postinsemination associations between the sexes in insects, with the full array of alternative hypotheses that have been offered for them, is presented. Subsequently, predictions drawn from the mate-guarding hypothesis are examined.
- (9827) ARGIA. *The news journal of the Dragonfly Society of the Americas*, Vol. 6, No. 3 (Oct. 15, 1994). – (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).
In addition to over 20 anonymous notes (mostly by N. Donnelly), the following are the signed articles: Orr, R.L.: Proposed DSA collecting policy (guidelines) (pp. 6-8); – Donnelly, N.: The US dot-map project (pp.

- 8-10); – *Daigle, J.*: North Carolina 1994 Annual Meeting (pp. 10-12); – *Tennessee, K.*: A collecting tip for Gomphus (p. 12); – *Daigle, J.*: Bonanza (pp. 12-13; announcement of the 1995 DSA meeting at Silver City, NM); – *Dunkle, S.W.*: A trip to the Texas hill country and a new U.S. record (pp. 13-15); – *Tennessee, K.J. & M.K. Painter*: Forced ejection of fecal pellets by nymphs of *Erythemis simplicicollis* (p. 15); – *Dunkle, S.W.*: Madagascar trip (pp. 15-16); – *Michalski, J.*: My trip to New Guinea (pp. 16-20); – *Noll, B.A.*: Timetraveller dragonfly (p. 20; poem); – *Daigle, J.*: Jarrell visits swamp – finds bugs (p. 20; *Nehalennia pallidula* in the Everglades, FL, USA).
- (9828) ARSHAD, M., 1994. *Taxonomic studies on Anisoptera of Balochistan*. M.Sc. thesis, Univ. Agric., Faisalabad. vi+76 pp. – (c/o Dr A. Khaliq, Dept Ent., Univ. Coll. Agric., Rawalakot, AK, Pakistan). 14 spp. and ssp. were studied from Ghaman, Ziarat, Loralai, Noshki, Mustang, Sanjavi, Machh, Dalbandin, Kalat, Khuzdar, Lasbela, Sibi, Kharan, Ab-e-Gum, Hub, Godani, Somiani, Uthal, Baghbana, Quetta, Hanna Lake and Pashin, all Baluchistan prov., Pakistan. Descriptive notes are given for all spp., figs of some structural features are added for some of them, and the morphology of adult *Crocothemis erythraea* and *C. servilia* is fully described and illustrated.
- (9829) ASAHINA, S., 1994. A revision of the genus *Rhipidolestes* from Taiwan and Japan. 5. *Shikoku representatives*. *Trans. Shikoku ent. Soc.* 20(3/4): 361-364. (Jap., with Engl.s.). – (Takadanobaba 4-4-24, Shinjuku-ku, Tokyo, 169, JA). *R. hiraoui* is the sole sp. represented on the island, where it is endemic, though rather common. This is a rather large sp., clearly distinct in the structure of penile organ, in some other morphological features and in coloration. The synonymy, description and illustrations are given.
- (9830) BELLE, J., 1994. On five species of *Phyllogomphoides* Belle, 1970, from Brazil, with the descriptions of three new taxa (Odonata: Gomphidae), *Zool. Meded.* 68(8): 73-85. – (Onder de Beumkes 35, NL-6883 HC Velp). The South American members of the genus are keyed, the ♂ of *P. calverti* is redescribed, the hitherto unknown ♂ of *P. praedatrix* is described, and the descriptions & figs are provided of *P. spiniventris* sp.n. (holotype ♂: State of Goiás, Fazenda Olho d'Água, Tora do Parque Nacional de Emas, 12-X-1982; deposited at MNRJ), *P. suspectus* sp.n. (holotype ♂: Rondônia, Rio Ouro Preto, VIII-1980; deposited at MNRJ), and *P. pseudangularis* sp.n. (holotype ♂: State of Amazonas, Rio Uruc Urucu, Coari, 14/24-V-1993; deposited at Depto Biol., Univ. Amazonas, Manaus).
- (9831) BROCKHAUS, T., 1994. Alpen-Mosaikjungfer (*Aeshna caerulea* Ström) und Alpen-Smaragdlibelle (*Somatochlora alpestris* (Sel.) in einigen Regenmooren der Tschechischen Republik und in den mitteleuropäischen Waldgebirgen (Insecta: Odonata: Aeshnidae, Corduliidae). *Faun. Abh. Mus. Tierk. Dresden* 19(20): 145-152. (With Engl. & Czech s's). – (Markt 20/21, D-09111 Chemnitz). *A. caerulea* is recorded from 2 Krkonoše localities, and *S. alpestris* from the same mountains and from the Šumava, all in Czech Republic. The altitudinal distribution of the 2 spp. in central Europe is analysed (*A. caerulea* above 1100 m, *S. alpestris* above 650 m).
- (9832) BROCKHAUS, T. & J. HERING, 1994. Erstnachweis des Südlichen Blaupfeils *Orthetrum brunneum* (Fonscolombe, 1837) in Sachsen (Odonata). *Ent. Nachr. Ber.* 38(1): 13-16. (With Engl. & Fr.s's). – (First Author: Markt 20/21, D-09111 Chemnitz). A breeding population of *O. brunneum* is recorded from a sand pit nr Rochlitz, Saxony, E Germany.
- (9833) BRODSKY, A.K., 1994. *The evolution of insect flight*. Oxford Sci. Publ., Oxford Univ. Press, Oxford. xiv+229 pp. ISBN 0-19-854681-5. – Price: NLG 170.- net. – (Publishers: Walton St., Oxford, OX2, 6DP, UK). A greatly modified, enlarged and updated version of the original Russian work as listed in OA 6698.
- (9834) BULLETIN OF AMERICAN ODONATOLOGY, Vol. 2, No. 3 (Oct. 1994). – (c/o Dr. T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13906, USA). *Donnelly, T.W. & K.J. Tennessee*: *Macromia illinoensis* and *georgina*: a study of their variation and apparent subspecific relationship (Odonata: Corduliidae) (pp. 27-61).
- (9835) BULLETIN OF THE HOKKAIDO ODONATOLOGICAL SOCIETY, Vol. 7 (June 30, 1994). (Jap., some papers with Engl. titles and s's). – (c/o Prof. Dr H. Ubukata, Dept Sci. Educ., Kushiro Coll., Hokkaido Univ. Educ., Shiroyama 1, Kushiro, 085, JA). *Jou, K.*: *Aeshna mixta* taken in the Sorachi district (p. 1); – *Satoh, M.*: Two dragonflies newly recorded from

- Rishiri Island (p. 1); – *Koyama, T.*: On *Oligoaeschna pryeri* in Sapporo (p. 2); – *Miyazaki, T. & Y. Saitoh*: Dragonflies of Sakhalin collected by H. Fukuda (pp. 3-4); – *Hiratsuka, K.*: On the variation of the black markings on the dorsum of *Coenagrion lanceolatum* in Rishiri Island (pp. 5-6); – On *Leucorrhinia intermedia* ijimai at Harutori Lake, Kushiro City (p. 7); – *Homma, S. & K. Hiratsuka*: Three dragonfly species taken in the Shiribeshi district (pp. 8-9); – *Nakatani, M.*: The discovery of *Ischnura asiatica* on the Nemuro peninsula (pp. 10-13); – *Ubukata, H.*: “The International Symposium on the Conservation of Dragonflies and their Habitats” was held in Kushiro, Hokkaido (pp. 14-19); – *Koyama, T.*: District-wise dragonfly distribution table for the neighbouring islets of Hokkaido (pp. 23-25); – *Ubukata, H.*: Review of odonatological publications (paper) (p. 26); – *Hiratsuka, K.*: Review of odonatological publications (books) (p. 27). – The membership list, address changes, Society rules, and some miscellaneous notes (pp. 28-31) complete the issue.
- (9836) BURKART, W., 1994. Libellenbeobachtungen bei Havelberg (Odonata). *Untere Havel naturk. Ber.* 3: 53-55. – (Am Emel 7, D-27412 Wilstedt). A checklist of 16 spp., evidenced during 29-VII/1-VIII-1992 in the vicinity of Havelberg, Sachsen-Anhalt, E Germany. *Erythromma viridulum* was sighted at 4 out of 6 ponds and it is considered locally autochthonous.
- (9837) CHOVANEC, A., 1994. Man-made wetlands in urban recreational areas – a habitat for endangered species? *Landscape & urban Planning* 29: 43-54. – (Umweltbundesamt, Spittelauer Lände 5, A-1090 Wien). This is another description of the set-up, odon. assemblage and management of the Danube island in Vienna, Austria, as dealt with in the publications listed in OA 7275, 8530, 9105 and 9389. A tab., showing the 1990-1992 colonisation of the man-made pond on the island by 17 odon. spp., is of particular interest.
- (9838) COBOLLI, M., C. UTZERI, E. DE MATTHAEIS & L. DELL'ANNA, 1994. Note preliminari sullo status tassonomico e la corologia italiana di *Chalcolestes parvidens* (st. nov.) (Odonata: Lestidae). *Riass. 17^o Congr. naz. ital. Ent., Udine*, p. 7 [abstract only]. – (Dipto Biol. Anim. & Uomo, Univ. Roma “La Sapienza”, Viale dell'Università 32, I-00185 Roma).
- The co-occurrence of *C. parvidens* and *C. viridis* in Italy is put on record. The genetic distance values, defined by the enzyme polymorphism, support the separate sp. status of the 2 taxa.
- (9839) COMPTE SART, A., 1994. La protección de los odonatos en España. *Progr. Resum. 6 Congr. iber. Ent., Madrid*, p. 106 [abstract only]. – (Depto Biodiv., Mus. Nac. Cien. Nat., C/José Gutiérrez Abascal 2, ES-28006 Madrid). Critical notes on some of the 6 odon. spp. that are legally protected in Spain.
- (9840) COMPTE SART, A., 1994. Sobre la identidad del fósil *Daemhippus cincuneguii* (Insecta: Odonata). *Progr. Resum. 6 Congr. iber. Ent., Madrid*, p. 30 [abstract only]. – (Depto Biodiv., Mus. Nac. Cien. Nat., C/José Gutiérrez Abascal 2, ES-28006 Madrid). The generic status of *Daemhippus Navas*, 1927 is confirmed.
- (9841) CORDERO, A., 1994. La reproducción de las libélulas: competencia entre espermatozoides. *Quercus* 101: 32-34. – (Area Ecol., Esc. Univ. Enxen. Tecn. Industr. Forestais, Avda Buenos Aires s/n, ES-36002 Pontevedra, Galicia). A note, directed at the general reader, using the example of *Coenagrion scitulum*.
- (9842) CÓRDOBA-AGUILAR, A., 1994. Adult survival and movement in males of the damselfly *Hetaerina cruentata* (Odonata: Calopterygidae). *Fla Ent.* 77(2): 256-264. (With Span.s.). – (Inst. Ecol., A.C., Apdo postal 63, MX-91000 Xalapa, Veracruz). During a mark-recapture study of this territorial sp., several changes in population size, survivorship and birth rates occurred, probably caused by physical conditions and a natural seasonal decline in population size. The average survival rate of males (expected value per day = 0.978) was the highest reported for the Calopterygidae and possibly all Odon. This value could have been affected by factors that reduced energy expenditures at the end of the season. Analysis of male dispersion showed aggregated distributions, which are expected for territorial species. While most males dispersed, no age-class showed a tendency to move upstream or downstream. Adult females were rare; however, the sex ratio of larvae was not significantly different from one.
- (9843) D'ANDREA, M. & S. CARFÌ, 1994. Annota-

- tions on a small dragonfly collection from Ghana, West Africa, with six new species for the national fauna (Odonata). *Opusc. zool. flumin.* 125: 1-7. – (First Author: Sez. Zool. Mus. Stor. Nat., "La Specola", Univ. Firenze, Via Romana 17, I-50125 Firenze).
12 spp. are listed from the city area of Accra and from 5 localities in the Eastern Region (Atewa, Akwapem and Shai Hills). *Enallagma deserti* Sel. is for the first time recorded from tropical Africa, while *Chlorocnemis elongata*, *Isomecrocnemis subnodalis*, *Gynacantha bullata*, *Diastatomma soror* and *Philonomon luminans* are likewise new to the fauna of Ghana.
- (9844) DELL'ANNA, L., 1994. Contributo alla conoscenza degli odonati dell'Egeo (Odonata). *Fragm. entomol.* 25(2): 257-265. (With Engl.s.). – (Dipto Biol. Anim. & Uomo, Univ. Roma "La Sapienza", Viale dell'Università 32, I-00185 Roma).
20 spp. are recorded from the Aegean islands of Karpathos, Kos, Kassos, Astypalea, Nisiros, Anaphy, Tylos, Halki and Santorini. *Orthetrum sabina* is for the first time reported from Greece (Kos Is.). Of interest are also the records of *Epallage fatime* (Kos), *Anax immaculifrons* (Karpatos; larvae at 3 streams) and *Hemianax ephippiger* (Karpatos, Kos, Kassos, Tylos, Halki).
- (9845) DOMMANGET, J.-L., 1994. *Atlas préliminaire des odonates de France. Etat d'avancement au 31/12/93*. Mus. Natn. Hist. Nat. & Soc. Fr. Odonatol. & Ministère Environ., Paris. 92 pp. [*Colln Patrimon. nat.*, vol. 16]. – (Orders to Author: 7 rue Lamartine, F-78390 Bois-d'Arcy).
This interim edition covers 83 spp., and is based on 49183 unpublished records, from 3083 districts in 95 departments. The previously published records represent another ca 30000 entries and are not considered in this work, which was organized and is conducted by the Author. In addition to the maps, the technicalities of the project are outlined.
- (9846) DONATH, H., 1994. Möglichkeiten des Naturschutzes und der Landschaftsentwicklung während der Bergbausanierung. *NatSchutz Landschaftspf. Brandenburg* 3(2): 16-19. – (Naturschutzstation Wanninchen, Landesumweltamt Brandenburg, D-15926 Görldorf).
Orthetrum brunneum and *O. coerulecens* are listed from the open-cast mine area of Schlabendorf, Lausitz, E Germany.
- (9847) DUFFY, W., 1994. Demographics of *Lestes disjunctus* (Odonata: Zygoptera) in a riverine wetland. *Can. J. Zool.* 72(5): 910-917. (With Fr.s.). – (Natr. Biol. Surv., Sth Dakota Coop. Fish & Wildlife Res. Unit, Sth Dakota St. Univ., P.O. Box 2140 B, Brookings, SD 57007, USA).
The study area is adjacent to the St Marys R., Michigan, USA. The areal extent of cover types within the 4.03-ha study area was measured and the densities of all life stages of *L. disjunctus* in separate cover types were converted to population estimates. Data were then analyzed using life-table techniques. The 1982 cohort oviposited an estimated 944 300 eggs in the 4.03-ha study area. Mortality in the egg stage was estimated to be 22.6%, of which 6.0% was associated with hatching and 16.6% was attributed to habitat loss. Survival through all larval instars was 5.5%. Mean larval production was 135 mg dry mass • m⁻² • year⁻¹. The mortality rate was greatest in final-instar larvae. Instars F-8 through F-6 dispersed from wracks to *Sparganium eurycarpum* beds. The ♀ : ♂ ratio of instars F-2 through F was 1.08:1.00 and varied from 1.91:1.00 to 1.01:1.00 in the adult stage. An estimated 20 100 adult ♀ emerged from the 4.03-ha study area, yielding a survival rate from the egg to adult stage of 4.3%. Lower potential fecundity in 1983 (45.2 eggs/♀) than in 1982 (73.5 eggs/♀), combined with low survival, yielded a net reproductive rate (R₀) of 0.97 and a population rate of increase (r) of -0.03.
- (9848) DUNN, R., 1994. 1993 dragonfly (Odonata) report. *J. Derbyshire ent. Soc.* 116: 3-7. – (4 Peakland View, Darley Dale, Matlock, Derby., DE4 2GF, UK).
The sequel in the series as listed in OA 9115, with the Derbyshire distribution maps of *Erythromma najas* and *E. viridulum*.
- (9849) ENJU, M., M. SATO & Y. SAITO, 1994. Differences between female larvae of two species of the genus *Davidius*. *Nature & Insects* 29(7): 27-30. (Jap., with Engl. title). – (Third Author: 5-26-12, Hirai, Edogawa-ku, Tokyo, 132, JA).
Very detailed descriptions and illustrations of *D. nanus* and *D. fujiami*.
- (9850) FERRERAS-ROMERO, M. & V. PUCHOL-CABALLERO, 1994. Voltinism and phenological differences in *Aeshna cyanea* (Müller, 1764) (Odonata: Aeshnidae). *Abstr. 5th Europ. Congr. Ent., Univ. York*, p. 167 [abstract only]. – (Depto Biol. Animal (Zool.), Fac. Cien., Univ. Córdoba, Avda San Alberto Magno

s/n, ES-14004 Córdoba).

[Almost verbatim]: *A. cyanea* is widely spread from the Mediterranean to S Scandinavia and it also occurs in N Africa and Asia Minor. Normally, the life cycle takes in the wild 3 or 2 yr; under laboratory conditions larval development requires 2 yr (16 months) or 1 yr (5-6 months). In all populations studied, as well as under laboratory conditions, there is an overwintering diapause in egg stage; smallest larvae are found during springtime and summer. In English population studied by Corbet, a generation is normally completed in 3 yr; (partivoltinism); by the last autumn the larvae have reached the penultimate instar (F-1); emergence of adults takes place in late June, July, and Aug. In S Spain, a generation is normally completed in 2 yr (semivoltinism); by the last autumn the larvae have reached the F-3 instar or, a smaller number, the antepenultimate instar (F-2); emergence takes place in late Aug. Sept. and early Oct. This late emergence may be correlated with the habitat including competition in the adult stage with other riverine Anisoptera, may be an adaptative response to longterm environmental effects on life history.

- (9851) FINCKE, O.M., 1994. On the difficulty of detecting density-dependent selection on polymorphic females of the damselfly *Ischnura graellsii*: failure to reject the null. *Evol. Ecol.* 8(3): 328-329. – (Dept Zool., Univ. Oklahoma, 730 Van Fleet Oval, Room 314, Norman, OK 73019-0235, USA).
A comment on the paper listed in OA 8691.
- (9852) FÖRSTER, S., 1994. Die Odonatenfauna des einstweilig sichergestellten NSG "Wilslebener See" und ihre Bedeutung für den Naturschutz. *NatSchutz Land Sachsen-Anhalt* 31(1): 27-36. – (Hinter dem Turm 1, D-06449 Aschersleben).
The odon. fauna of NR "Wilslebener See", NE Harzvorland, Germany (23 spp., of which 16 spp. autochthonous), is described and discussed. The occurrence of *Anaciaeschna isosceles* is of particular regional interest.
- (9853) FRASERIA (New Series), *South Asian Bulletin of Odonatology*, Vol. 1, No. 1 (June 1, 1994). Published semiannually by SIO Regional Office in South Asia, Nagpur. Edited by Dr D.B. Tembhare (Nagpur), with the Ed. Board, constituted from workers in Bangladesh, India, Nepal and Pakistan. – Annual subscription: free for SIO members resident in South Asian countries, Rs/IC 120.- for other residents in India, US \$ 20.-/NLG 40.- for all others. – Orders to be sent to: SIO ROSA, Dept. Zool., Nagpur Univ. Campus, Nagpur-44010, or SIO Central Office, P.O. Box 256, NL-3720 AG Bilthoven.
With No. 20/22 (cf. OA 8706) this periodical ceased as a traditional SIO newsletter, and it is to continue now in a New Series, as a proper journal, "devoted to the advancement of odonatology in the South Asian region", publishing odonatological news and short original research communications. – C o n t e n t s: [Dedication of the issue to the late Professor Dr J.M. Van Brink, with a portrait] (p. 1); – (Anonymous): [Obituary] Dr J.A.L. Watson (p. 2, with a portrait); – Tembhare, D.B.: *Fraseria*: from a newsletter to bulletin (p. 3); – Andrew, R.J.: 4th South Asian Symposium of Odonatology (pp. 4-6); – Prasadani, P.K. & K.P. Janardanan: On a new species of actinocephalid gregarine (Apicomplexa: Cephalaria) from the dragonfly *Neurothemis fulvia* (Drury) of Kerala (India) (pp. 7-10); – Sandhu, R. & G.K. Walia: Karyological study on four female libellulids from Assam (India) (pp. 11-15); – Tembhare, D.B.: Effect of Precocene II on yolk lipid deposition in the dragonfly *Orthetrum chrysis* (Selys) (pp. 15-18); – Subramanian, M.A. & G. Varadaraj: Impact of tannery effluent on tissue free amino acids in the larvae of dragonfly *Pantala flavescens* (Fabricius) (pp. 19-21); – News [3 items] (p. 22).
- (9854) GARCIA, J.J., R.E. CAMPOS & A. MACIA, 1994. Prospección de enemigos naturales de Culicidae (Diptera) de la selva marginal de Punta Lara (prov. de Buenos Aires, Republica Argentina). *Revta Acad. colomb. Cienc.* 19(72): 209-215. (With Engl.s.). – (Third Author: Centro Estud. Parasitol., CEPAVE, Calle 2, No. 584, AR-1900 La Plata).
Acanthagrion lancea and *Erythemis attala* are listed.
- (9855) GEREND, R. & R. PROESS, 1994. Nachweis neuer und interessanter Libellen aus Luxemburg nebst einer provisorischen Fassung der Roten Liste der einheimischen Odonaten (Insecta, Odonata). *Bull. Soc. Nat. luxemb.* 95: 299-314. (With Engl.s.). – (First Author: 35 rue de Hellange, L-3487 Dudelange).
Aeshna isosceles, *Cordulegaster boltonii* and *Sympetrum meridionale* are for the first time reported from Luxembourg. For 10 other, locally interesting spp. new records and habitat descriptions are provided. So far 58 spp. are known from Luxembourg, and a preliminary Red List is here offered.

- (9856) GESSNER, K.-G., 1994. Ein Fund der Kleinen Zangenlibelle (*Onychogomphus forcipatus* (L.)) im Stadtgebiet von Trier. *Dendrocopos* 21: 194-196. – (Kaiserstr. 15, D-54290 Trier).
Kyll R., 1 ♂, sighted on I-VII-1993 and again on 9-VII-1993. – For the earlier Rhineland-Palatinate records of this sp. cf. OA 3307, 5807, 9260.
- (9857) GLOTZHOBER, R.C., 1994 [recorded]. *Kids and dragons. Projects for students using dragonflies.* Hand-out, 2 pp. – (Ohio Hist. Soc., 1982 Velma Ave., Columbus, OH 43211-2497, USA).
A hand-out, used with a training program at Camp Campbell gard, Ohio, USA, listing 6 projects with larvae (indoor) and adults (in the wild).
- (9858) GONZÁLEZ MARTÍNEZ, S.C. & L.F. VALLADARES, 1994. La comunidad de odonatos y heterópteros acuáticos de un humedal restaurado: la Laguna de La Nava (Palencia) (Odonata, Heteroptera Gerromorpha y Nepomorpha). *Progr. Resum. 6 Congr. iber. Ent., Madrid*, p. 120 [abstract only]. – (Depto Cien. Agroforest., E.U. Politécnica Agr., Univ. Valladolid, ES-34004 Palencia).
10 odon. spp. of 4 fam. were recorded, but they are not listed here.
- (9859) GREGORI, J., 1994. *Zelenci naravni rezervat. – Zelenci Nature Reserve. – Zelenci Naturreservat.* Triglavski narodni park, Bled. 120 pp. – ISBN none. (Slovene, Engl., Germ.). – Price: SIT 2250.- net). – (Slovene Mus. Nat. Hist., Prešernova 20, P.O. Box 290, SLO-61001 Ljubljana, Slovenia).
This is an attractive, commercially published and richly illustrated "monograph" on the "lake" of Zelenci, i.e. the source of the Sava Dolinka R., NW Slovenia. *Platetrum depressum* is photographically recorded. – (*Abstracter's Note*: No odon. breed at the actual lake, but dragonfly larvae do occur in its various outflows. – cf. also OA 9774, 9872).
- (9860) HACHMOLLER, B., G. ENGLER & P. REUSSE, 1994. Neue sächsische Nachweise von *Ophiogomphus serpentinus* Charp. (Insecta: Odonata: Gomphidae). *Faun. Abh. Mus. Tierk. Dresden* 19(20): 255-256. – (First Author: Grüner Weg 19, D-01109 Dresden).
Breeding colonies of *O. caecilia* (= *O. serpentinus*) are reported from 2 streams in Saxony, E Germany.
- (9861) HAGENIA. *Mitteilungsblatt des Nationalen Büros der SIO in der Bundesrepublik Deutschland und der GdO*, No. 8 (Sept 1, 1994). – (c/o M. Schorr & U. Krüner, p/a Waldfrieden 25, D-54314 Zerf).
The following are some of the titles of ca 30 notes and articles in this 20 pp. issue: *Schorr, M.*: Fragebogenaktion zur Zukunft der SIO-Zeitschriften (p. 1); – *Gerken, B.*: Protokoll der Mitgliederversammlung der Gesellschaft deutschsprachiger Odonatologen (GdO) (pp. 2-3); – *Schorr, M.*: Prix Jean Rostand an H. Heidemann und R. Seidenbusch (p. 3); – Tagungsbericht vom 1. Odonatologischen Symposium der Alpen-Adria-Regionalgemeinschaft (pp. 4-6); – Diplomarbeiten und Dissertationen (pp. 6-7); – "Exuviae" (p. 7); – "Studia odonatologica hungarica" (pp. 7-8); – *Jödicke, R.*: Iberische Libellenfunde (p. 10); – *Fliedner, H.*: Zum Erfassungsbogen für *Erythromma viridulum* (pp. 10-11); – *Lempert, J.*: Libellen und Literatur (pp. 11-12); – *Hoess, R.*: Libelleninventar des Kantons Bern (pp. 14-15). – There are also reviews of the Rheinland-Pfalz and Mecklenburg-Vorpommern Red Lists, of the 1994 ed. of Dragonfly atlas of France, etc. (all by *M. Schorr*), various announcements, sale offers, various incidental notes, etc.
- (9862) HAHN, U., 1994. *Vergleichende ökologische Untersuchungen der Libellenfauna unterschiedlich genutzter Weiher im Landkreis Ravensburg unter besonderer Berücksichtigung der Wasserchemie.* Dipl.-Arb. (Biol.) Univ. Hohenheim. vi+146 pp., Appendix excl. – (Breitwiesenstr. 29, D-70839 Gerlingen).
The impact of fish, pond management and of various hydrochemical parameters on the odon. assemblages of several man-made ponds were studied. The incidental (artificial) draining (causing the subsequent freezing of the pond bottom) and the low O₂ summer values exercise a pronounced influence on the odon. fauna. The ponds that are temporarily drained for the sake of fish management, support an impoverished odon. assemblage, but some of the spp. occur there massively.
- (9863) HANDKE, K., 1994. Untersuchungen zur Gewässerfauna in einer Agrarlandschaft bei Grossenkneten/Landkreis Oldenburg (Odonata, Heteroptera, Coleoptera). *Beitr. Naturk. Niedersachs.* 47(2): 62-71. – (Stedinger Landstr. 98, D-27751 Delmenhorst).
25 odon. spp. are listed from 27 localities in an area W of Bremen, Germany. The records of *Ceragrion tenellum* and *Sympetrum pedemontanum* are discussed.
- (9861) HAGENIA. *Mitteilungsblatt des Nationalen*

- (9864) HEYMER, A., 1994. *Libélulas de la Cataluña española. Contribución faunística y ecológica, considerando cuestiones etológicas*. Oficina ibérica de la SIO, Córdoba. 26 pp. – (Orders to: Dr M. Ferreras Romero, Depto Biol. Animal (Zool.), Fac. Cien., Univ. Córdoba, Avda San Alberto Magno s/n, ES-14004 Córdoba).
A bilingual (German/Spanish) ed. of the German work, published originally (1964) in *Beitr. Ent.* 14 (5/6): 601-617.
- (9865) HOESS, R., 1994. *Libelleninventar des Kantons Bern*. Naturh. Mus. Bern, Bern. 100 pp. ISBN 3-907088-05-0. (With Engl. & Fr.s's). – [*Jb. naturh. Mus. Bern* 12]. – (Available at NLG 48.- net from the Eds of Odonatologica, Bilthoven).
The distribution of the 71 spp. known from the canton of Bern, Switzerland, is mapped, and information on abundance, altitudinal distribution, habitat requirements and possible threats to population survival is given. A brief history of odonatology in the canton of Bern as well as a complete bibliography are included, and aspects of dragonfly conservation are discussed. An appendix lists all localities with dragonfly observations between 1970 and 1992.
- (9866) ISHIZAWA, N., 1994. Thermoregulation of dragonflies of *Sympetrum* species in the lowlands in mid-summer. *Gekkan-Mushi* 281: 13-17. (Jap., with Engl. title). – (1644-15, Yamaguchi, Tokorozawa-shi, Saitama 359, JA).
[Abstract not available].
- (9867) JORDAN, S., S. KNALMANN, B. SPRENGER & S. BRUNZEL, 1994. Zur Kenntnis der Insektenfauna (Macrolepidoptera, Odonata, Saltatoria) im Ostteil (Serrahn) des Müritz-Nationalparks unter Berücksichtigung der Habitatsprüche ausgewählter Arten. *Ent. Z., Essen* 104(16): 309-326. (With Engl.s.). – (First Author: Biegenstr. 8, D-35037 Marburg).
From the Müritz National Park, nr Neustrelitz, E Germany, 37 odon. spp. are listed and the fauna is briefly discussed.
- (9868) *JOURNAL OF THE BRITISH DRAGONFLY SOCIETY*, Vol. 10, No. 2 (Oct. 1994). – (c/o Mrs J. Silsby, 1 Haydn Ave., Purley, Surrey, CR8 4AG, UK).
Holmes, J.D. & S. Randolph: An early emergence (one year life-cycle) of *Libellula depressa* Linnaeus and *Anax imperator* Leach (pp. 25-28); – *Clarke, D.J.*: Notes on the larva and generation time of *Aeshna caerulea* (Ström) in Scotland, with particular reference to the south-west (pp. 29-36); – *Radford, P.*: Headless 'life' of female Southern Hawker *Aeshna cyanea* (Müller) (p. 37); – *Goodyear, G.*: A new look at *Brachytron pratense* (Müller) in the New Forest (p. 38); – *Taylor, M.R.*: The predation of *Sympetrum sanguineum* (Müller) by *Vespula germanica* (Fabricius) (Hymenoptera, Vespidae) (p. 39); – *Foster, C.N.*: Evidence for pH intensity in Odonata of peat pools (pp. 40-44); – *Thickett, L.A.*: Predation of a freshly-emerged zygopteran by a social wasp (pp. 44-45); – *Paine, A.*: Notes and observations (pp. 45-46); – *Recent odonatological publications* (pp. 47-48); – *Silsby, J.*: Book review (p. 48).
- (9869) KAWASHIMA, I., 1994. Morphology and habits of prolarval and larval stages of *Oligoaeschna pryleri* (Martin) (Aeshnidae: Odonata). *Nature & Insects* 29(7): 44-46. (Jap., with Engl. title). – (Author's address not stated).
[Abstract not available].
- (9870) KHALIQ, A. & M. YOUSUF, 1994. Coenagrionidae (Zygoptera: Odonata) of Pakistan. 4. Subfamily Coenagrioninae, with phylogenetic relationships of the Pakistan genera of the family. *Pakistan J. Zool.* 26(2): 135-137. – (First Author: Dept Ent., Univ. Coll. Agric., Rawalakot, AK, Pakistan).
Cercion calamorum dyeri is the sole Pakistani member of the subfam. It has been first reported in the M.Sc. diss., listed in *OA* 7059, and 16 more specimens, from another locality, are here placed on record. The deviating structural features of this material are described. In addition, the principal morphological features of the 7 Pakistani coenagrionid genera are analysed, and a dendrogram of their mutual affinities is presented. – For the earlier pts of this series cf. *OA* 8955, 9288, 9666.
- (9871) KIAUTA, B. & M. KIAUTA, 1994. Dragonfly records from the districts of Ribnica and Kočevje, Lower Carniola, Slovenia (Odonata). *Opusc. zool. flumin.* 124: 1-8. – (P.O. Box 256, NL-3720 AG Bilthoven).
27 spp. are recorded from 10 localities, of which 5 spp. were not previously listed from the province. Brief annotations, an outline of the history of odon. exploration of Lower Carniola, and the regional bibliography are included.
- (9872) KIAUTA, B. & M. KIAUTA, 1994. A note on

the dragonfly assemblage at the intermittent pond of Ledine, Julian Alps, NW Slovenia (Odonata). *Opusc. zool. flumin.* 124: 9-12. – (P.O. Box 256, NL-3720 AG Bilthoven).

Some biological propensities of the assemblage (9 spp.), dwelling at this peculiar alpine habitat in the Upper Sava Valley, nr Rateče (alt. 848 m), are briefly discussed and a reference is made to the possibility of a phreatic life history of some of the spp.

- (9873) KIAUTA, B. & M. KIAUTA, 1994. On a small autumnal dragonfly collection from the Cariboo and southwestern British Columbia, Canada (Odonata). *Opusc. zool. flumin.* 126: 1-8. – (P.O. Box 256, NL-3720 AG Bilthoven).

Annotations are given on 21 spp., collected in Sept. 1993 at 29 localities (alt. ca 20-1260 m). The occurrence of very appreciable *Siphonura costiferum* populations as far North as Williams Lake (52°08'N 122°09'W) and Prince George (53°55'N 122°45'W) is of some interest. A reference to crepuscular flight of *Aeshna eremita* is made. Some autumnal flight period extensions are recorded for *Lestes congener*, *Argia emma*, *Ischnura perparva* and *Anax junius*.

- (9874) KIMMINSIA. *Newsletter of the U.K. National Office of the International Odonatological Society (SIO)*, Vol. 5, No. 2 (Nov. 1, 1994). – (c/o Mrs J. Silsby, 1 Haydn Ave., Purley, Surrey, CR8 4AG, UK).

Signed articles: *Silsby, J.*: Societas Internationalis Odonatologica (p. 9); – *Wain, B.*: Altitudinal aspirations for *Aeshna affinis* (p. 12); – *Meskin, I.*: Pseudagrion in the shade (pp. 12-13); – *Vick, G.*: The Guyana Highlands (p. 13); – *Maibach, A.*: Swiss odonatology, past and present (pp. 14-16). – In addition, ca 15 workers contributed to the traditional sections, viz. "News from members", "Conservation news", "News from the universities", etc.

- (9875) KOMNICK, H. & U. GIESA, 1994. Intestinal absorption of cholesterol, transport in the haemolymph, and incorporation into the fat body and Malpighian tubules of the larval dragonfly *Aeshna cyanea*. *Comp. Biochem. Physiol.* (A)107(3): 553-557. – (Inst. Cell Biol., Univ. Bonn, Ulrich-Haberland-Str. 61a, D-53121 Bonn).

Doses of 1.5 μ mol cholesteryl oleate ingested by the larvae were partially hydrolysed in the intestinal lumen and the liberated oleic acid absorbed, while free cholesterol and unhydrolysed cholesteryl oleate were eliminated in the faeces. Ingestion of [4-¹⁴C] chole-

sterol dissolved in olive oil revealed that the larvae also absorbed free cholesterol, the minor part of which (up to 12%) was esterified in the midgut epithelium. Absorption and esterification were markedly enhanced when the same dose of labelled cholesterol was administered in 20% aqueous bovine serum albumin. Radioactivity was rather slowly released into the haemolymph where it was nearly exclusively associated with free cholesterol apart from traces of labelled cholesteryl ester which maximally amounted to 2.9% after 15 days. In the fat body labelled cholesteryl ester maximally amounted to 65% after 15 days, while in the triacylglycerol-storing Malpighian tubules it remained below 1% at all time periods investigated.

- (9876) KOMNICK, H. & D. WACHTMANN, 1994. Assimilation and esterification of dietary fatty alcohol by the nymphal dragonfly, *Aeshna cyanea*. *Insect Biochem. molec. Biol.* 24(3): 319-328. – (Inst. Cell Biol., Univ. Bonn, Ulrich-Haberland-Str. 61a, D-53121 Bonn).

In vitro and in vivo studies on the midgut, haemolymph, fat body and Malpighian tubules using [1-¹⁴C] palmityl alcohol with and without unlabelled oleic acid revealed that free fatty alcohol was readily absorbed from the midgut lumen. The absorbed fatty alcohol was partly assimilated in the midgut epithelium to fatty acid and esterified predominantly to polar lipids and acyl glycerols. The non-assimilated alcohol was esterified with endogenous or dietary fatty acid to wax ester, which was released into the haemolymph and transported to the lipocytes of the fat body and Malpighian tubules. Fatty alcohol assimilation was highest in the midgut wall and fat body, while wax ester synthesis was highest in the midgut lumen, followed by the midgut epithelium and fat body. Dietary oleic acid reduced the concentration of free fatty alcohol as a result of pre-absorptive wax ester synthesis in the midgut lumen and decreased the rate of fatty alcohol absorption.

- (9877) KOSUGI, Y., 1994. Nature and insects in Shinodayama. *Nature & Insects* 29(6): 15-19. (Jap., with Engl. title). – (Author's address not stated).

The paper deals entirely with dragonflies and contains a list of 38 spp.; Shinodayama, Japan (taxonomic nomenclature).

- (9878) KURILLO, J., 1994. *Živa narava v objektivu. – [Living nature in the lens]*. Kmečki glas, Ljubljana. 114 pp. – ISBN 961-203-063-4. (Slovene). –

- (Smledniška 12a. SLO-64000 Kranj, Slovenia). The odon. are dealt with on pp. 53-55. Included is a set of photographs of the transformation of *Libellula quadrimaculata* (Stražišče-pri-Kranju, Slovenia; 17-V-1992; 09.00-11.15 h a.m.).
- (9879) KUTTNER, R., 1994. Die Zweigestreifte Quelljungfer im Colditzer Forst südlich von Leipzig (Odonata). *Ent. Nachr. Ber.* 38(1): 55. – (Dorfstr. 161, D-09306 Königshain).
A detailed description of the newly discovered *Cordulegaster boltonii* habitats at 2 streams S of Leipzig, Germany.
- (9880) LIBELLENNIEUWSBRIEF, Hilversum, Vol. 2, Nos 3-5 (publication dates not stated; June-Nov., 1994). (Dutch). – (c/o V. Kalkman, v. Hogendorplaan 11, NL-1215 EG Hilversum).
[Main, signed articles, in Engl. translation]: (No. 3): *Ketelaar, R. & M. Wasscher*: Dragonflies in July and August (pp. 5-10); – *Kalkman, V.*: *Aeshna isosceles* in the Flevopolder (p. 10); – Interim report on *Calopteryx splendens* (pp. 11-12); – *La Haye, M.*: Exuviae of *Cordulia aenea* at the Nature Conservancy boat-house in Naardermeer (p. 13); – *Ketelaar, R.*: *Cordulia aenea*: a real heights-crawler (pp. 13-14 *Fliedner, H.*: Observations on *Erythromma viridulum* (p. 17). – (No. 4): *Ketelaar, R.*: Dragonflies in the autumn (pp. 3-8); – *Van de Haterd*: Dragonflies at Voorne (pp. 8-10); – *Ketelaar, R.*: Numerous *Lestes barbarus* records in 1994 (pp. 11-14). – (No. 5): *Wasscher, M.*: Dragonfly observations in 1994 (pp. 1-3); – *Achterkamp, B.*: *Aeshna viridis* in Drente (p. 3); – (Anonymous): Dragonflies along the Ruiten Aa river, Groningen (pp. 4-5); – *Achterkamp, B.*: Dragonflies in the Wieden (pp. 5-8).
- (9881) LIBELLULA. *Mitteilungsblatt der Gesellschaft deutschsprachiger Odonatologen (GdO)*, Vol. 13, No. 1/2 (Oct. 1994). – (c/o Mrs U. Krüner, Gelderner Str. 39, D-41189 Mönchengladbach).
Reinhardt, K.: Zur Aktivität von *Nehalennia speciosa* (Charpentier) in Nordpolen (Zygotera: Coenagrionidae) (pp. 1-8); – *Gharadjedaghi, B.*: Libellenkartierung im Landkreis Deggendorf (Niederbayern) (pp. 9-31); – *Petzold, F.*: Bemerkenswerte Libellenfunde in der Muldeniederung bei Dessau (pp. 33-46); – *Leise, T., G. Zimmermann & B. Beinlich*: Die Libellen der Oberen Eder in Hessen unter besonderer Berücksichtigung zweier bemerkenswerter Funde (pp. 47-57); – *Sternberg, K.*: Eine Güllegrube und eine wassergefüllte Fahrspur als zwei extreme Sekundärbiotope für Libellen (pp. 59-72); – *Petzold, F.*: Entwicklungsnachweis von *Aeshna affinis* Vander Linden in Sachsen-Anhalt (Anisoptera: Aeshnidae) (pp. 73-79).
- (9882) MACHET, P., 1994. Note synonymique sur un odonate néotropical. *Revue fr. Ent.* (N.S.) 16(2): 50. (With Engl.s.). – (65 bd de la République, F-92210 Saint-Cloud).
Coryphaeschna guyanensis Machet, 1991, as described in the paper listed in OA 7577, is synonymized with *C. adnexa* (Hagen, 1861).
- (9883) MALANGPO. *Newsletter of the Thai National Office of the International Odonatological Society (S.I.O.)*, No. 11 (Nov. 1994). – (c/o Bro. A. Pinratana, St Gabriel's Coll., 565 Samsen Rd, Bangkok-10300, Thailand).
Hämäläinen, M.: Dragonflies of Mount Kinabalu (the highest mountain of Borneo) (pp. 77-81); – *Dunkle, S.W.*: Odonata collected in Thailand 22-27 July 1993 (pp. 82-86).
- (9884) MARTINEZ-DELCLÒS, X. & A. NEL, 1994. Los Gomphidae (Insecta, Odonata, Anisoptera) del Cretácico Inferior de España. *Revta esp. Paleontol.* 9(2): 176-184. (With Engl.s.). – (First Author: Depto Geol. dinàmica, Fac. Geol., Univ. Barcelona, ES-08071 Barcelona).
Illedaegomphus torcae sp.n. is described and illustrated (holotype & paratype: Lower Cretaceous of Las Hoyas, Cuenca prov., Spain; deposited in the Armando Diaz-Romeral coll., Cuenca, Spain). A redescription is also provided of *I. pallerolae* (Gómez), and the affinities of the 2 spp. are discussed.
- (9885) MARTINIA. *Bulletin des odonatologues de France*, Vol. 10, No. 2 (June 1994), No. 3 (Sept. 1994). – (c/o J.-L. Dommangeat, 7 rue Lamartine, F-78390 Bois-d'Arcy).
(No. 2): *Le Calvez, V.*: Observations d'odonates dans la région du Puisaye (département de l'Yonne) (pp. 21-22); – *Prévost, O. & P. Durepaire*: Etat de la population de *Leucorrhinia caudalis* (Charpentier, 1840) dans la réserve naturelle du Pinail (département de la Vienne) (pp. 23-27); – *Durepaire, P. & O. Prévost*: Les exuvies d'odonates: refuge pour araignées (p. 32); – *Duquesne, M.*: Les odonates de la vallée de l'Oise de Noyon à la Fère (départements de l'Oise et de l'Aisne) (pp. 33-35); – *Goutet, P.*: Une facture bien originale (pp. 35-36); – *Noblecourt, T.*: Contribution à l'inven-

taire des odonates du département de l'Aude (p. 37); – *Dommanget, J.-L.*: Rubrique bibliographique (pp. 37-40). – (No. 3): *Durepaire, P. & O. Prévost*: Prédations d'odonates par les araignées dans la réserve naturelle du Pinail (département de la Vienne) (pp. 41-45); – *Lecocq, S.*: Découverte d'*Onychogomphus uncatu*s (Charpentier, 1840) dans le département de l'Orne (Odonata, anisoptère, Gomphidae) (pp. 46-47); – *Noblecourt, T.*: *Oxygastra curtisii* (Dale, 1834) et la crue de la Sals à Couiza (département de l'Aude) (Odonata, anisoptère, Corduliidae) (p. 48); – *Goyaud, C.*: Contribution à l'inventaire des odonates du département de la Guadeloupe (49-61); – *Boudier, F./Dommanget, J.-L.*: Analyses d'ouvrages (pp. 62-64).

- (9886) [MASSOP, L.G.] KRAGTEN, R., 1994. Hoop op ringslangen, vleermuizen, salamanders en libellen langs spoor naar Blauwkapel. *Utrechts Nieuwsbl.*, issue of Aug. 25, p. 13 (Dutch). – (c/o Ms. L.G. Massop, Dienst Stadsbeheer, Afd. Openbare Werken, P.O. Box 8406, NL-3503 RK Utrecht).
A provincial daily's interview with the City-Ecologist of Utrecht, the Netherlands, with reference to, a.o., the recolonization measures for dragonflies in the polder at the city outskirts.
- (9887) MATSUKI, K. & Y. ARAI, 1994. Introductions and problems of present studies of dragonfly larvae. [Sic!]. *Nature & Insects* 29(7): 2-7. (Jap., with Engl. title). – (First Author: 1575-14, Hazama 3-chome, Funabasi, Chiba, 274, JA).
[Abstract not available].
- (9888) MATSUKI, K. & I. MAKIBAYASHI, 1994. The types of cleavage lines on the head of dragonfly larvae. 2. *Nature & Insects* 29(7): 31-43. (Jap., with Engl.s.). – (First Author: 1575-14, Hazama 3-chome, Funabasi, Chiba, 274, JA).
[Abstract not available].
- (9889) MAUERSBERGER, R., 1994. Zur wirklichen Verbreitung von *Orthetrum coerulescens* (Fabricius) und *O. ramburi* (Selys) = *O. anceps* (Schneider) in Europa und die Konsequenzen für deren taxonomischen Rang (Odonata, Libellulidae). *Dt. ent. Z. (N.F.)* 41(1): 235-256. (With Engl.s.). – (Waldstr. 4, D-16278 Steinhöfel).
O. coerulescens and *O. anceps* are very closely related forms, the first of which is distributed in Europe farther NW than the latter. For the distinction of these 2 forms, only one reliable character (structure of lamina anterior of the 2nd abd. segm. in ♂) can be utilized. A review of the localities of museum specimens revealed that the 2 taxa are allopatric with a belt of secondary intergradation along the line of contact. Hybrid populations exist in Sicily as well as in Hungary and the Balkan. Whereas the "influence" of *coerulescens* on the phenotypes decreases gradually from W to E on the Balkan peninsula (but is still recognizable even on Crete), the parental forms persist, isolated by the "Strait of Bonifacio", on Sardinia and Corsica, respectively. Single hybrids have been found, however, far outside the zone of secondary intergradation. It is obvious that *coerulescens* and *anceps* are not full spp., but rather members of a supersp. or even ssp., which would have to be united under the older name *O. coerulescens* (Fabr.).
- (9890) MOORE, N.W., 1994. Odonata Specialist Group. Triennial report 1991-1993. *Species* 21/22: 77. – (Farm House, 117 Boxworth End, Swavesey, Cambridge, CB4 5RA, UK).
Mainly based on the exhaustive reports as listed in OA 8293, 9474.
- (9891) MULLER, K., 1994. *Gomphus pulchellus* Selys (Odo., Gomphidae). *Mitt. ent. Ver. Stuttgart* 29: 66. – (Blumenstr. 9, D-73650 Winterbach).
A corrective/supplementary note on the paper listed in OA 9551. In the Stuttgart area, *G. pulchellus* is known since 1986. Some additional local records of this sp. are stated.
- (9892) MUNOZ-POZO, B. & M. FERRERAS-ROMEIRO, 1994. Seguimiento plurianual del desarrollo de una generación primaveral de *Hemianax ephippiger* in Andalucía (Odonata, Aeshnidae). *Progr. Resum. 6 Congr. iber. Ent., Madrid*, p. 133 [abstract only]. – (Depto Biol. Animal (Zool.), Fac. Cien., Univ. Córdoba, Avda San Alberto Magno s/n, ES-14004 Córdoba).
Depending on the meteorological conditions, *H. ephippiger* migrates to Spain from N Africa during the last winter months, when the reproductive activity also takes place. Larval development requires about 100 days, the exuviae appear in June-July.
- (9893) MURAKI, A., 1994. A report of endangered *Macromia daimoji* Okumura. *Nature & Insects* 29(7): 19-26. (Jap., with Engl. title). – (Shigino-nishi 3-4-2-309, Joutou-ku, Osaka, 536, JA).
[Abstract not available].

- (9894) NAVASIA. *Noticiario de la Oficina ibérica de la Sociedad Internacional de Odonatología (S.I.O.)*. – *Noticiario de Oficina ibérica da Sociedade Internacional de Odonatologia (S.I.O.)*, Córdoba, Vol. 3 (Sept. 1994). – (c/o Dr M. Ferreras Romero, Depto Biol. Animal (Zool.), Fac. Cien., Univ. Córdoba, Avda San Alberto Magno s/n, ES-14004 Córdoba).
- Anselin, A.: El grupo de estudio de libélulas Gomphus: presentación (pp. 1-3); – [Jurzitza, G.]: Un nuevo libro sobre odonatos (pp. 3-4; review of the volume listed in OA 9273); – Jödicke, R.: Marcha de larga distancia para la emergencia en *Sympetrum fonscolombii* (Selys) y *Orthetrum cancellatum* (L.) (pp. 5-6); – Jurzitza, G.: Cercion Navas, 1907 sinonimo de *Erythromma Charpentier*, 1840 (p. 6); – Santos Quirós, R.: *Onychogomphus costae* Selys, 1885 capturado en la provincia de Sevilla, sur de España (Anisoptera: Gomphidae) (pp. 6-7); – Jurzitza, G.: Observaciones de *Aeshna juncea* (L., 1758) en el norte de la provincia de Madrid (p. 7); – Muñoz-Pozo, B.: Odonatofauna de unas charcas estacionales proximas a la ciudad de Córdoba (sur de España) (pp. 7-8); – Gonzalez del Rosario, J.: Citas de odonatos en Cadiz (sur de España) (pp. 8-9); – *Curiosidades odonatológicas* (pp. 9-11); – *Novidades de la odonatología ibérica* (pp. 11-12).
- (9895) NEL, A. & J.-C. PAICHELER, 1994. Les Libellulidae fossiles. Un inventaire critique (Odon., Anisoptera, Libelluloidea). *Ent. gall.* 4(4): 166-190. (With Engl. & Ital.s's). – (First Author: 8 av. Gassion, F-13600 La Ciotat).
- A revised, descriptive catalogue of the fossil Libellulidae is presented. The family is known from the Cenozoic only. The following taxa are described and illustrated as new: *Paleotrimea aquisextana beskonakensis* ssp.n., *P. fasciata* sp. n., and *P. acutibucula* sp.n.; all 3 from the "oligo-miocène" of Bes-Konak, Anatolia, Turkey (holotypes in MNHN, Paris, under resp. Nos LP-R-07885, 07881 and 07909). Further: *Paleotauriphila marquesi* gen.n., sp.n. (holotype: Oligocene of Dauphin, Alpes-de-Haute-Provence, France; MNHM-LP-R-54377) and *Tauriphila(?) cerestensis* sp.n. (holotype: Stampien, Upper Oligocene of Cereste, France; in coll. Lutz, Darmstadt).
- (9896) NEWSLETTER [OF THE] BRITISH DRAGONFLY SOCIETY, No. 26 (Autumn 1994). – (c/o Mrs J. Silsby, 1 Haydn Ave., Purley, Surrey, CR8 4AG, UK). The Society has now 1326 members. On 16 pp., the newsletter contains 28 numbered sections, plus the "Junior section". 83(=ca 7%) of the membership responded to the questionnaire (cf. OA 9607), the answers are here analysed. A note on conservation was contributed by N. Moore (p. 5). V. Perrin writes on the "Opening of Britain's 2nd Dragonfly Sanctuary" (p. 12; Waltham Abbey, Essex, just beyond the outer fringes of N London), various field trip reports contain a number of interesting records.
- (9897) NISHIDA, T., 1994. Emergence and oviposition of *Aeschnophlebia anisoptera* Selys and habitat of its larva. *Nature & Insects* 29(7): 12-18. (Jap., with Engl. title). – (Author's address not stated). [Abstract not available].
- (9898) NOLL, B.A., 1994. Timetraveler dragonfly. *Am. Ent.* 40(3): 192. – (Author's address not stated). A poem. Reprinted also in *Argia* 6(3): 20; 1994.
- (9899) PATERSON, M.J., 1994. Invertebrate predation and the seasonal dynamics of microcrustacea in the littoral zone of a fishless lake. *Arch. Hydrobiol.* (Suppl.) 99(1/2): 1-36. – (Dept Fisheries & Oceans, Freshw. Inst. Sci. Lab., 501 University Cres., Winnipeg, MB, R3T 2N6, CA).
- The effects of invertebrate predation on seasonal changes in abundance, species composition, and size of microcrustacea were examined at Jack Lake, nr Halifax, Nova Scotia, Canada. Gut content analyses and abundance estimates indicate that odon. are among the most important predators in the littoral zone. Manipulations of densities of large and small odon. provided no evidence of strong predator effects on microcrustacean community structure. The most abundant spp. are *Enallagma carunculatum*, *Cordulia shurtleffi* and *Leucorrhinia glacialis*, and data are presented on their phenology and life history (pp. 21-23). In addition to these, *Lestes* sp., *Enallagma boreale* and *Aeshna interrupta* are also listed.
- (9900) PIX, A., 1994. *Sympetrum fonscolombi* Selys, 1848 mit zwei Generationen eines Jahres neben *Orthetrum brunneum* Fonscolombe, 1837 (Insecta: Odonata: Libellulidae) in Abbaugruben Südniedersachsens und Nordhessens. *Götting. naturk. Schr.* 3: 89-96. (With Engl.s.). – (Mönchehofstr. 1, D-34127 Kiel).
- The emergence, teneral individuals and exuviae of *S. fonscolombii* are reported from several secondary habitats in the vicinity of Göttingen, Germany; 12/15-X-1990, 3/12-X-1991. The local bivoltinism of this sp. is discussed and it is ascribed to the exceptionally favourable climatic conditions during the past 4 yr.

These are also considered responsible for the local occurrence of *O. brunneum*.

- (9901) POIRIER, B. & A. DOUMERET, 1994. Papillons et libellules de la réserve naturelle du marais d'Yves (CM). *Annls Soc. Sci. nat. Charente-Maritime* 8(3): 241-243. – (Second Author: Ligue Protect. Oiseaux, Réserve Naturelle du Marais d'Yves, F-17340 Yves). A checklist of 23 odon. spp., with a brief discussion on the local occurrence of *Lestes macrostigma*; Charente-Maritime, France.
- (9902) RAHMAN, A., 1994. *Taxonomic studies on Anisoptera of Punjab*. M. Sc. thesis, Univ. Agric., Faisalabad. vi+97 pp. – (c/o Dr A. Khaliq, Dept Ent., Univ. Coll. Agric., Rawalakot, AK, Pakistan). 35 spp. and ssp. were studied from Bahawalpur, Multan, Faisalabad, Head Balloki, Head Sulemanki, Lahore, Sialkot, Sargodha, Khushab, Chakwal, Attock, Rawalpindi, Kahuta and Murree, all Punjab prov., Pakistan. *Anax immaculifrons*, *Iconogomphus rapax*, *Mesogomphus lineatus*, *Nepogomphus modestus*, *Bradynopyga geminata*, *Orthetrum glaucum*, *Tramea virginia* and *U.s.signata* are for the first time recorded from Pakistan. *Crocothemis erythraea* and *C. servilia* are described in detail, while for the remaining spp. some descriptive notes and annotations are provided.
- (9903) RETTIG, K., 1994. Grosse Königlibelle erstmals bei Emden nachgewiesen. *Beitr. Vögel- Insektenwelt Ostfrieslands* 75: 5. – (Danziger Str. 11, D-26725 Emden). *Anax imperator*, 1 ♂, Knock nr Emden, Friesland, 20-VII-1994.
- (9904) SAITO, O., 1994. *Sympetrum frequens*. In: C. Beccaletto & G. Mirabella, *Ex libris da tutto il mondo 1992-94*, p. 205, 25^o Congr. int. *Ex libris*, Milano. – (3-2-29 Fushinidai, Inagawa-cho, Kawabe-gun, Hyogo, JA). A reproduction of the bookplate, depicting the dragonfly; taxonomic name and Jap. inscription.
- (9905) SAMMELBERICHT (1994) *UBER LIBELLENVORKOMMEN IN BADEN-WÜRTTEMBERG*, No. 10 (Stand: Febr. 1994). Schutzgemeinschaft Libellen Baden-Württemberg, Freiburg i. Br. Compiled by R. Buchwald, B. Höppner & A. Schanowski. 36 pp. – (c/o Dr R. Buchwald, Sautierstr. 75, D-79104 Freiburg i. Br.). Updated ed. of the work as listed in OA 9169.
- (9906) SAMWAYS, M.J., 1994. *Insect conservation biology*. Chapman & Hall, London-New York-Tokyo [etc.]. xvi+358 pp. ISBN 0-412-45440-8. – Price: NLG 150.- net. – (Publishers: 2-6 Boundary Row, London, SE1 8HN, UK). A ground-breaking work, covering a wide range of topics, from single sp. to landscape conservation. The approach is both positive and realistic, with insects being discussed in the contexts of sustainable development, agroecology and monitoring environmental change. Ethical issues, as well as preservation technology and restoration ecology are also considered and some clear-cut recommendations for the future are made. The Author is an active odonatologist, therefore the book contains many (well balanced) references to the odon.
- (9907) SCHUMANN, H., 1994. *Libélulas en la primavera en Mallorca*. Oficina ibérica de la SIO, Córdoba. 7 pp. – (Orders to: Dr M. Ferreras Romero, Depto Biol. Animal (Zool.), Fac. Cien., Univ. Córdoba, Avda San Alberto Magno s/n, ES-14004 Córdoba). A bilingual (German/Spanish) ed. of the German work, published originally (1967) in *Beitr. Naturk. Niedersachs.* 20: 92-94.
- (9908) SEIDENBUSCH, R., 1994. Libellen in der Süd-türkei und etwas Geschichte. *Aqua Geographia* 2(7): 72-80. – (Klenze-Str. 5, D-92237 Sulzbach-Rosenberg). – The journal issue is available at DEM 12.50 from: Aquaprint Verlag, Am Hengstbach 3, D-63263 Neu Isenburg. A commercially published glimpse into the Taurus dragonfly world, S Turkey, with a brief text, but delightful photographs of adult and larval dragonflies and of some of their habitats. Among the spp. presented are *Calopteryx splendens intermedia*, *Epallage fatime*, *Ceriagrion georgifreyi*, *Caliaeschna microstigma*, *Gomphus s. schneideri*, *Onychogomphus assimilis*, *O. forcipatus albotibialis*, *Sonja-gaster insignis*, *Crocothemis erythraea*, *Ladona pontica* and *Trithemis festiva*. Col. portraits of several of these are published here for the first time. For all spp. notes on the local habitats are stated, and a brief biographic note on the Author (portrait incl.) is appended.
- (9909) SHIBUCHAN [*Bulletin of Dragonfly Research Association, Tokyo*], Vol. 1 (Apr. 1, 1994). (Jap.). – (c/o I. Wakana, Kami-shakujii, Nerima-ku, Tokyo, 177, JA). The first issue of this new periodical (42 pp.; 18x25.5

- cm) contains ca 20 signed articles and notes. It is nicely produced and includes several col. photographs, which are not reproduced in the journal, but rather attached at the appropriate places as prints.
- (9910) SIOJA. [Information bulletin of the SIO Japan Branch Office], Osaka, 1994, No. 2 (Aug. 1), No. 3 (Aug. 21). (Jap.). – (c/o K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545, JA).
No. 2 (6 pp.) presents a Japanese translation of the Editorial questionnaire as circulated in *Odonatologica* 23(2), with annotations and background explanations by the Head of the SIO Japan Branch. – No. 3 (2 pp.) gives details on the 13th Int. Symp. Odonatol., Essen.
- (9911) S[OVINC], A., 1994. Exuviae 1/1. *Delo* (Knjiž. Listi) 36(232), 1p., issue of Oct. 6. (Slovene). – (Jamova 50, SLO-61000 Ljubljana).
A review of the journal issue as listed in OA 9715.
- (9912) SUMIYA, T., A. SANEMATSU & N. OSAWA, 1994. Migration of *Sympetrum frequens*. *Insectarium, Tokyo* 31(5): 150-152. (Jap., with Engl. title). – (Authors' addresses not stated).
[Abstract not available].
- (9913) THANGAM, T.S. & K. KATHIRESAN, 1994. Predatory behaviour by larvae of *Brachythemis contaminata* (Fabr.) on larvae of *Culex pipiens quinquefasciatus* Say (Odonata: Libellulidae – Diptera: Culicidae). *Opusc. zool. flumin.* 123: 1-6. – (Cent. Adv. Stud. Marine Biol., Annamalai Univ., Parangipettai-608 502, India).
Predation was studied with respect to satiation time, maximum food intake, food preference and daily food consumption. Larvae were satiated within 40 min. Consumption increased rapidly up to 24 h and the maximum food consumption was attained after 36 h of starvation. Larvae preferred mosquito larvae to pupae. Average daily food consumption was 24.7 mosquito larvae/dragonfly.
- (9914) TILDEN, A.R., W.J. ANDERSON & V.H. HUTCHINSON, 1994. Melatonin in two species of damselfly, *Ischnura verticalis* and *Enallagma civile*. *J. Insect Physiol.* 40(9): 775-780. – (Dept Zool., Univ. Oklahoma, Norman, OK 73019, USA).
Melatonin (MEL) was measured with radioimmunoassay procedure. *I. verticalis* were sampled over 24 h in ambient outdoor L13.5: D10.5 photoperiod and thermoperiod (15 to 30.5°C), and we found a significant MEL cycle with a peak during scotophase/cryophase. The range of [MEL] was 11.2 to 20.2 pg mg body mass⁻¹. *E. civile* were sampled over 24 h at a L12:D12 photoperiod and 25°C and at mid-photophase and mid-scotophase at both 10 and 30°C. Mean [MEL] was 0.957 pg mg body mass⁻¹, and [MEL] did not differ significantly among times of day or temperatures.
- (9915) TSCHUDIN, M., 1994. Libelle in Not. *CoopZig, Basel* 1994(38): 16. – (Author's address not stated).
A general note, referring to the "Sammlung von Roten Listen der gefährdeten Tierarten", published recently by the Bundesamt für Umwelt, Wald und Landschaft (Buwal), Bern, where 60% of the odon. spp. are listed as "endangered" in Switzerland.
- (9916) TSCHUDIN, M., 1994. Teufelsnadel mit Superblick. *Sonntags-Blick*, issue of June 19, p. 69. – (Author's address not stated).
A general note in a widespread Swiss newspaper.
- (9917) UBUKATA, H., 1994. Odonate fauna of the northwestern part of Shiretoko Peninsula. *Sylvicola* 12: 57-63. (Jap., with Engl.s.). – (Dept Sci. Educ., Kushiro Coll., Hokkaido Univ. Educ., Shiroyama 1, Kushiro, 085, JA).
36 spp. are listed, of which *Cercion calamorum* and *Davidius m. moiwanus* have not been hitherto recorded from the Peninsula.
- (9918) UBUKATA, H., 1994. Peat bog as a habitat of dragonflies and environmental education on it. *Progr. & Abstr. Int. Forum "Peat bog as a habitat for insects, its management and environmental education"*, Kushiro, pp. 6-7 (Jap. & Engl.). – (Dept Sci. Educ., Kushiro Coll., Hokkaido Univ. Educ., Shiroyama 1, Kushiro, 085, JA).
A general note, with emphasis on the Kushiro Marsh (cf. OA 9176).
- (9919) UEDA, T., 1994. Migration of Odonata. *Nature & Insects* 29(10): 17-21. (Jap., with Engls. title). – (Ishikawa Agric. Coll., Suematsu, 1-chome, Nonoichi-machi, Ishikawa-gun, Ishikawa, 921, JA).
General; in a journal issue devoted to the insect migration topics.
- (9920) ULLAH, N.U., 1994. *Taxonomic studies on Anisoptera of Sindh*. M.Sc. thesis, Univ. Agric., Faisalabad. vi+77 pp. – (c/o Dr A. Khaliq, Dept Ent.,

- Univ. Coll. Agric., Rawalakot, AK, Pakistan).
12 spp. were studied from Sukkur, Nawabshah, Jamshoro, Hyderabad, Badin, Thatta, Karachi and the E bank of the Hub R., all Sindh prov., Pakistan. Most spp. are fully described, structural features of some are illustrated, and a statement on the habits and habitats for all of them is provided.
- (9921) UTZERI, C. & M. COBOLLI, 1994. Il popolamento a odonati delle piccole isole circumsarde. *Riass. 30^a Congr. Soc. ital. Biogeogr.*, p. 15 [abstract only]. – (Dipto Biol. Animal. & Uomo, Univ. Roma "La Sapienza", Viale dell'Università 32, I-00185 Roma).
For the full paper cf. *OA* 9463.
- (9922) VAN HALM, H., 1994. Nieuwe plekken voor libellen? – [New habitats for dragonflies?] *Mens & natuur* 45(2): 40-42. (Dutch). – (Author's address not stated).
General; on the deteriorating status of most odon. spp. in the Netherlands.
- (9923) WALKERIA. *Newsletter of the Canadian National Office of the International Odonatological Society – Bulletin du Bureau national canadien de la Société odonatologique internationale*, Vol. 9, No. 1 (June 1994). – (c/o Ms N.L. House, 116 Irving Ave., Ottawa, Ont., K1Y 1Z4, CA).
[House, N.L.]: Book review [of the work listed in *OA* 9384, 9703] (p. 1); – House, N.L.: New records for Nova Scotia (p. 2); – Forbes, M.: Information request [for an across species study of female limited polymorphism in North American odonates] (pp. 2-3); – Kiauta, B.: Canadian dragonfly bibliography (pp. 3-4). – Also included are an announcement and a purchase request.
- (9924) WATANABE, K., 1994. Odonata of Ryukyus and the protection. *Nature & Insects* 29(7): 8-11. (Jap., with Engl. title). – (145-1, Maesato, Ishigaki, Okinawa, 907, JA).
[Abstract not available].
- (9925) WERNER, E.E. & M.A McPEEK, 1994. Direct and indirect effects of predators on two anuran species along an environmental gradient. *Ecology* 75(5): 1368-1382. – (First Author: Dept Biol., Univ. Michigan, Ann Arbor, MI 48109, USA).
The interactions that influence the distribution of larvae of *Rana catesbeiana* and *R. clamitans* along the environmental gradient of permanent to temporary ponds were examined at 18 experimental ponds in SW Michigan, USA. A series of laboratory choice experiments was conducted with the 3 major predator types, viz. larval *Anax junius*, the salamander *Ambystoma tigrinum*, and the bluegill *Lepomis macrochirus*. *R. catesbeiana* larvae were more vulnerable to *Anax* and *Ambystoma* than were those of *R. clamitans* (because of higher activity levels).
- (9926) WIESER, K.H., 1994. Libellen und ihre Larven. *TI-Magazin* 26(119): 44-45. – (Author's address not stated).
General, directed at garden pond owners.
- (9927) ZHAO, X. (CHAO, H.-f.), 1994. Odonata [larvae]. In: J.C. Morse, L.F. Yang & L.X. Tian, [Eds], Aquatic insects of China for monitoring water quality, pp. 135-175, Hohai Univ. Press, Nanjing. – (Biol. Control Res. Inst., Fujian Agric. Univ., Fuzhou, Fujian-350002, P.R. China).
An illustrated descriptive key to the genera.

1995

- (9928) DE MARMELS, J., 1995. Some dragonfly records from central and northern Israel (Odonata). *Opusc. zool. flumin.* 128: 1-9. – (Inst. Zool. Agric., Fac. Agron., Univ. Central Venezuela, Aptdo 4579, Maracay 2101-A, Venezuela).
34 spp., mainly collected in Upper Galilee between March and June 1975, are listed. *Platycnemis kervillei*, *Ischnura pumilio*, *Crocothemis servilia* and *Symphetrum s. striolatum* are new for the country.