

ODONATOLOGICAL ABSTRACTS

1997

- (14416) ALFRED, J.R.B. & A. KUMAR, 1997. Fauna of Delhi: faunal analysis (based on available data). *State Fauna Ser. zool. Surv. India* 6: 891-903. — (Second Author: Northern Regional Stn, Zool. Surv. India, Dehra Dun-248195, India).
A tabular review of animal spp. recorded from Delhi, India; no species lists, numbers per fam. only. The odon. are represented by 47 spp.

- (14417) KUMAR, A., 1997. Fauna of Delhi: Odonata, imagos. *State Fauna Ser. zool. Surv. India* 6: 147-159. — (Northern Regional Stn, Zool. Surv. India, Dehra Dun-248195, India).
A revised and updated checklist (47 spp.) of the odon. fauna of Delhi, India, incl. 4 spp. published for the first time. Precise locality data, descriptive notes and remarks on bionomy are presented for 21 spp.

- (14418) KUMAR, A., 1997. Fauna of Delhi: Odonata, larval stages. *State Fauna Ser. zool. Surv. India* 6: 161-172, 4 pls (76 figs) incl. — (Northern Regional Stn, Zool. Surv. India, Dehra Dun-248195, India).
An illustrated key to the families and genera known to occur in Delhi, India.

- (14419) WALLACE, J.B., S.L. EGGERT, J.L. MEYER & J.R. WEBSTER, 1997. Multiple trophic levels of a forest stream linked to terrestrial litter inputs. *Science* 277(5322): 102-104. — (First Author: Dept Ent. & Inst. Ecol., Univ. Georgia, Athens, GA 30602, USA).
The ecosystem-level consequences of excluding detrital inputs to an ecosystem are demonstrated experimentally. Inputs of riparian detritus are essential for conservation or restoration of diverse food webs. The infor-

mation on *Lanthus* sp. and *Cordulegaster* sp. abundance and biomass is included.

1998

- (14420) ALFRED, J.R.B., A.K. DAS & A.K. SANYAL, [Eds], 1998. [Faunal diversity in India:] Odonata. In: J.R.B. Alfred et al., [Eds], *Faunal diversity in India: a commemorative volume in the 50th year of India's independence*, pp. 172-178, ENVIS Centre, Zool. Surv. India, Calcutta. — (First Author: Director, Zool. Surv. India, 234/4, A.J.C. Bose Rd, Calcutta-700020, India).

The earliest reference to Indian dragonflies appears in the Sangam literature, dated prior to the 8th century AD. At present, 449 spp. and sspp. are known from the Indian territory, 23% of which are endemic. A review is presented of the numbers of spp. known from various regions, and some considerations on conservation strategies and future studies are provided.

- (14421) DER MOUW, J.A., 1998. Schomm'lend weeg-schaaltje, ritselt de libel. In: G. van Rijsbergen, K. Verbeek & B. Verbeek, [Eds], *Dichterbij: Betuwe in poëzie*, p. 38, Boekhandel B.O.S., Zetten, ISBN 90-9011558-7. (Dutch). — (Publishers: Hoofdstraat 84, NL-6671 CC Zetten).

A dragonfly poem, reprinted from Author's (1863-1919) collected works, published in 1986.

- (14422) KUMAR, P., 1998. Dragon and damselflies in Lucknow University Campus. *News. Invert. Gr., CBSG* 2(2): 1. — (Dept Zool., Lucknow Univ., Lucknow, India).

General; without a species list.

- (14423) MAGIDI-SHILASAR, F., A. KHARRAZI-PAKDEL, P. AZMAYESH FARD, A. PAZUKI & H. HEIDARI, 1998. The fauna of Odonata in Bandar-Anzali. [*Proc.*] 13th Iran. Plant Prot. Congr., Karaj 1: 23-27. (Persian, with Engl. s.). — (Last Author: Plant Pests & Diseases Res. Inst., Chamran Park Way, Tehran-19395, Iran).

14 spp. are listed from various habitats at this locality, NW Iran. *Lestes sponsa*, *L. viridis*, *Aeshna isosceles*, *Libellula quadrimaculata* and *Orthetrum albistylum* are for the first time recorded from Iran.

1999

- (14424) BOWLER, J., I. BULLOCK, J. CADBURY, J. GERLACH & J. HUNTER, 1999. The ecology and conservation of Aride island, Seychelles. *Phelsuma* 7: 37-55. — (First Author: Shepherd's Cottage, Heylipol, Isle of Tiree, Argyll, PA77 6TY, UK).

The history and ecosystems of the Aride Island Special Reserve are described, and its flora and fauna (incl. 13 odon. spp.) are listed.

- (14425) LOGAN, J.A., 1999. Extraction, polymerase chain reaction, and sequencing of a 440 base pair region of the mitochondrial cytochrome oxidase I gene from two species of acetone-preserved damselflies (Odonata: Coenagrionidae, Agrionidae). *Environ. Ent.* 28(2): 143-147. — (Dept Evol. & Ecol., Univ. California, Davis, CA 95616, USA).

The use of acetone-preserved specimens in molecular DNA research is investigated, *Enallagma civile* and *Hetaerina americana* were soaked in acetone before drying. Total genomic DNA was successfully extracted, amplified and sequenced from the acetone-preserved damselflies with no noticeable effect from either the acetone or preservation time. Nucleotide sequences of a 440 bp region of the mitochondrial cytochrome oxidase I gene are presented for *E. civile* and *H. americana*. These 2 spp. have reached a saturated divergence level and it seems that the COI gene will not be useful for developing phylogenies at this taxonomic level.

- (14426) WUST, E. & R. ALGE, 1999. Libellen und wirbellose Wassertiere des Naturschutzgebietes Gsieg-Obere Mähder, Lustenau (Vorarlberg). *Vorarlberg. Naturschau* 6: 111-120. — (First Author: Elserweg 3a, A-6714 Nüziders).

A commented list of 35 odon. spp. from a Nature Reserve nr Lustenau, Vorarlberg prov., E Austria.

2000

- (14427) BELZ, A. & M. FUHRMANN, 2000. *Beiträge zur Tier- und Pflanzenwelt des Kreises Siegen-Wittgenstein*. Bd. 6. *Libellen*. Biol. Stn Rothaargebirge & Ver. z. Förderung zwischen NatSchutz u. Landwirtschaft, Siegen-Wittgenstein & Naturschutzbund Dtl., Siegen. vi+82 pp. Paperback (16.5×23.3 cm). ISBN none. Price: € 15.- net. — (Available from: NABU, In der Hüttenwiese 30, D-57072 Siegen).

The 35 spp. of the Siegen-Wittgenstein distr. in S Westphalia, Germany are described. Their occurrence in the district is mapped, and information is provided on local habitats and biology for each sp. Col. field portraits are included of 33 spp. — (See also OA 8036).

- (14428) KUMAR, A., 2000. Fauna of Renuka Wetland: Odonata (adults). *Wetland Ecosyst. Ser. zool. Surv. India* 2: 45-53. — (Northern Regional Stn., Zool. Surv. India, Dehra Dun-248195, India).

With reference to the papers listed in OA 1718 and 2778, the odon. fauna of Renuka Lake, Himachal Pradesh, India, is keyed (37 spp.) and field notes are provided.

- (14429) KUMAR, A., 2000. Fauna of Renuka Wetland: Odonata (larvae). *Wetland Ecosyst. Ser. zool. Surv. India* 2: 55-62, 4 pls (86 figs) incl. — (Northern Regional Stn., Zool. Surv. India, Dehra Dun-248195, India).

The known larvae, occurring in Renuka Lake, Himachal Pradesh, India, are keyed and their structural features are illustrated.

- (14430) SRIVASTAVA, V.D. & C. SINHA, 2000. [Fauna of Tripura, 2] Insecta: Odonata. *State Fauna Ser. zool. Surv. India* 7: 155-196, pls 1-4, maps 1-9, tab. 1 incl. — (Zool. Surv. India, 'M-Block', New Alipore, Calcutta-700053, India).

So far 35 spp. are known from the state of Tripura, E India. All known records of these are listed, most of them also mapped, the spp. are keyed and described, and notes on their habitats are provided.

- (14431) SZÁLLASSY, N., E. BÁRDOSI, D.Z. SZABÓ & G. DÉVAI, 2000. Fluktuáló aszimmetria és párzási siker párzó és nem párzó *Ischnura elegans* (Odonata: Coenagrionidae) hímeknél. — Fluctuating asymmetry in paired and unpaired males of the damselfly *Ischnura elegans* (Odonata: Coenagrionidae). *Hidrol. Közl.* 81(5/6): 514-516. (Hung., with Engl. s.). — (First

Author: Dept Ecol. & Hydrobiol., Univ. Debrecen, P.O. Box 71, HU-4010 Debrecen).

The hypothesis that the more symmetrical are the wings, the greater is the success the individuals achieve in pairing was tested. ♂♂ were collected 3 times during the reproductive period, and separated as paired and unpaired in the field. Body size was calculated, and the distance between arculus and the proximal pterostigma corner was measured in order to determine the fluctuating asymmetry rate. Neither reproductive success nor body size were correlated significantly with wing asymmetry. The inadequate determination of reproductive success and contradictions between long- and short-term studies are discussed as a possible explanation of this result.

2001

- (14432) *AESCHNA*, Osaka (ISSN 1341-1047), No. 38 (31 May 2001). (Jap., with Engl. titles, some papers with Engl. s's). — (c/o K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545-0004, JA).
Kondoh, S.: Notes on dragonflies in Rokko Island, an artificial island in Kobe, Hyogo pref., Japan (pp. 1-7); — *Kawashima, I.*: A record of *Somatochlora clavata* Oguma from Gifu city, Gifu pref. (p. 8); — *Yokoyama, T.*: Notes on the durations of the egg stages in some dragonflies in Hokkaido, 3 (pp. 9-12); — *Sasamoto, A.*: Records of Odonata collected from Sichuan of China by Kyoto University Butterfly Research Club (pp. 13-16); — *Kawashima, I.*: The records of Odonata from Mikasa city, Surachi province, Hokkaido (pp. 17-23); — *Futahashi, R., M. Fukui, M. Yoshida & T. Yokoyama*: Breeding records of eggs and larvae of *Sympetrum depressiusculum* (Selys, 1841) (pp. 24-26); — *Yoshida, M.*: Collecting and breeding data of some odonate larvae, 4 (pp. 27-34); — *Araki, Y. & R. Futahashi*: Record of collecting and breeding of larvae of *Anax guttatus* in Toyama pref. (pp. 35-38); — *Futahashi, R., H. Futahashi & Y. Araki*: Observation of copulation and oviposition of *Sympetrum cordulegaster* (pp. 39-40); — *Kitagawa, K.*: The Odonata of the paddy field in Sri Lanka, collected by Mr Terunobu Hidaka (pp. 41-43); — *Kita, H.*: Oviposition in triple-connection of *Indolestes boninensis* (Asahina) ♂-♂-♀ (type A) (p. 44).
- (14433) ALLEN, J. & T. HUMPHRIES, 2001. *Ben jij een libel?* Gottmer, Haarlem. 31 pp. ISBN 90-257-03347-6. Hardcover (21.5x21.5 cm). Price: € 8.50 net. (Dutch). — (Publishers: Gottmer & Becht, P.O. Box 160, NL-2060 AD Bloemendaal).
 This is a Dutch edn of the original Engl. work (2001, *Are you a dragonfly?*, Kingfisher, London), directed at primary school children. The life of *Aeschna cyanea* is described and beautifully illustrated, and some general information on dragonflies is provided. — A highly recommended book for children at the age of 7-10 yr.
- (14434) ARNOLD, A., 2001. Neue Nachweise von Gomphiden (Odonata) im Regierungsbezirk Leipzig (Sachsen) und am Bitterfelder Muldestausee (Sachsen-Anhalt). *Veröff. NaturkMus. Leipzig* 20: 62-65. — (Zur schönen Aussicht 25, D-04435 Schkeuditz).
 Various records of *Gomphus vulgatissimus* and *Ophiogomphus cecilia* are listed for the Leipzig distr. and for the state of Sachsen-Anhalt. The re-appearance of the 2 spp. is due to the recent water quality improvement of the large rivers in E Germany.
- (14435) BAL, D., H.M. BEIJER, M. FELLINGER, R. HAVEMAN, A.J.F.M. VAN OPSTAL & F.J. VAN ZADELHOFF, 2001. *Handboek natuurodoeltypen*. — *Handbook of nature target types*. Expertisecentrum LNV, Wageningen. 829 pp. Paperback. ISBN 90-75789-09-2. Price • 30.- net. (Dutch, with Engl. s.). — (Publishers: P.O. Box 30, NL-6700 AA Wageningen).
 This is the 2nd, much enlarged edn of the work listed in OA 12070. On p. 785, 18 odon. spp. are listed as 'target spp.', and 5 spp. as 'non-target, but monitored spp.'. Vernacular nomenclature only.
- (14436) BOWLER, J., 2001. New Odonata records from Seychelles, 1998-2000. *Phelsuma* 9: 56-57. — (Shepherd's Cottage, Heylipol, Tiree, Scotland, PA77 6TY, UK).
 Annotated records from the islands of Aride, Grande Soeur, Praslin, La Digue and Curieuse.
- (14437) BROCKHAUS, T., 2001. Beobachtungen zur Libellenfauna der Shivapuri Berge, Nepal (Odonata). *Ent. Nachr. Ber.* 45(3/4): 221-223. (With Engl. s.). — (An der Morgensonne 5, D-09387 Jahnsdorf/Erzgebirge).
 Field notes on *Caliphaea confusa*, *Davidius aberrans*, *Anotogaster nipalensis*, *Neallogaster hermionae* and *Orthetrum glaucum*; — Shivapuri Hills, ca 10 km N of Kathmandu, alt. 2200-2732 m; May 2000.
- (14438) BROCKHAUS, T., 2001. Sächsische Libellentagung in Dörfel. *Ent. Nachr. Ber.* 45(3/4): 170). —

- (An der Morgensonne 5, D-09387 Jahnsdorf/Erzgebirge).
A brief report of the 4th Saxonian Dragonfly Meeting, Dörfel, 28-30 Sept. 2001.
- (14439) CAIRNS, J. & J.R. PRATT, 2001. A history of biological monitoring using benthic macroinvertebrates. In: D.M. Rosenberg & V.H. Resh, [Eds], *Freshwater biomonitoring and benthic macroinvertebrates*, pp. 10-27, Kluwer, Boston-Dordrecht-London. ISBN 0-412-02251-6. — (First Author: Virginia Polytech. Inst. & St. Univ., Blacksburg, VA 24061-0415, USA). In early classification schemes, odon. were used as pollution indicators by R.E. Richardson (1925, *Bull. Ill. nat. Hist. Surv.* 15: 391-422; — 1929, *ibidem* 17: 387-475) and A.R. Gaufin (1958, *Ohio J. Sci.* 58: 197-208).
- (14440) CORPORAAL, A. & A.H.F. STORTELDER, 2001. Kansen voor natuur binnen Losser: achtergrond-document natuur. — [Chances for nature in the Losser district: background document]. *Alterra Rapp.* 364: 1-110. (Dutch). — (Alterra, P.O. Box 47, NL-6700 AA Wageningen).
Calopteryx splendens is reported as abundant in the Dinkel R., Twente, the Netherlands.
- (14441) CZACHOROWSKI, S., E. BIESIADKA & O. ALEKSANDROWICZ, 2001. Protection of species diversity of aquatic insects in the southeastern part of Baltic region. *Acta biol. Univ. daugavpiliensis* 1(1): 3-6. — (Dept Ecol. & Envir. Prot., Fac. Biol., Univ. Warmia & Mazury, Zolnierska 14, PO-10-561 Olsztyn). The concerned region covers parts of Poland, Belarus, Lithuania and Russia, and is characterized by a comparatively good state of the environment, though the aquatic insect fauna is increasingly exposed to anthropogenic impacts. The situation is described and references to the odon. are included. The creation of transboundary protected areas and the organisation of a monitoring system are advocated.
- (14442) DE MARMELS, J.C., 2001. *Revision of Megapodagrion Selys, 1886 (Insecta, Odonata: Megapodagrionidae)*. Diss. Dr. sc. nat., Math.-naturw. Fak. Univ. Zürich. vi+220 pp. (With Germ. S.). — (Mus. Inst. Zool. Agric., Fac. Agron., Univ. Central Venezuela, Aptdo 4579, Maracay 2101-A, Venezuela). The S. American genus is split into *Megapodagrion* s. str., *Allopodagrion* Förster and *Teinopodagrion* gen. n. The following new spp. are described: *Allopodagrion brachyurum* sp. n., *Teinopodagrion angulatum* sp. n., *T. caquetanum* sp. n., *T. chinchaysuyum* sp. n., *T. decipiens* sp. n., *T. depressum* sp. n., *T. epidrium* sp. n., *T. eretes* sp. n., *T. meridionale* sp. n., *T. schiessi* sp. n., *T. turikum* sp. n., *T. vallenatum* sp. n., *T. vilorianum* sp. n., *T. waynu* sp. n., and *T. yunka* sp. n. The 3 genera are equally related to each other, but *Megapodagrion* s. str. is the most euapomorphic. Penis morphology suggests a closer transpacific relationship of the *Megapodagrion*-complex with several argiolestine genera of the Malayan and Austro-Papuan regions, and a more remote relationship with some genera in Asia, Madagascar, W Africa Central America and western S America. The 3 genera of *Megapodagrion*-complex began to rise from a common ancestor probably in the Late Cretaceous, while the recent spp. are of Oligocene/Miocene age. Ecologically, the distribution of each of the 3 genera closely matches certain well-defined types of forest.
- (14443) DOBRAVEC, J., A. SELIŠKAR, S. TOME & B. VREŠ, 2001. *Biotopi Slovenije CORINE — CORINE biotopes Slovenia*. ZRC SAZU, Ljubljana. 110 pp. Paperback (16.3x23.5 cm). ISBN 961-6358-51-0. (Slovene, with Engl. s.). — (First Author: Triglav National Park, Kidričeva 2, SI-4260 Bled).
The CO[R]dination of IN[formation on the] E[nvironment] program was set up by the European Union in 1985, with the objective to provide concise and comparative information on the environment, which is to serve as a basis for the European environment policies. On the basis of habitat types, species richness and the occurrence of threatened spp., 73 areas of "European importance" were selected in Slovenia. These are here listed and a cumulative checklist of (some of) the local spp. is provided. The latter includes 38 odon. spp., prepared by A. Pirnat (Groharjeva 18, SI-1241 Kamnik).
- (14444) EDA, S., 2001. Annual review of entomology in particular insect groups: dragonflies. *Gekkan-Mushi* 363: 48-57. (Jap., with Engl. title). — (3-4-25, Sawamura, Matsumoto, Nagano. 390-0877, JA). Deals with the Japanese achievements in 2000; — abstract not available.
- (14445) FLIS, J., 2001. *Ozelenjevanje brežin ob in na odlagališču produktov razveplanja TEŠ: idejni projekt*. — [Verdancy creation on the slopes of the desulphurization products deposit of the thermoelectric plant Šoštanj, Slovenia: a suggested project]. ERICO,

- Velenje. 40 pp. (Slovene). — (c/o F. Avberšek, Director, ERICO Velenje, Koroška 58, SI-3320 Velenje). At the gypsum deposit, the adults of 18 odon. spp. were identified (May-Nov. 2000). Their local occurrence and habitat requirements are species-wise stated (pp. 28-36). — See also OA 14495.
- (14446) HERRMANN, J., 2001. Aluminium is harmful to benthic invertebrates in acidified waters, but at what threshold(s)? *Water Air Soil Pollut.* 130(1/4): 837-842. — (Freshw. Ecol. Group, Dept Biol. & Environ. Sci., Univ. Kalmar, P.O. Box 905, S-391 82 Kalmar). The literature on acidification effects related to the contributing impact of increased aluminium levels at low pH on benthic invertebrates is reviewed. The evidence on *Enallagma* sp., *Somatochlora cingulata* and *Libellula julia* (cf. OA 5227, 6618, 8263) indicates, the odon. larvae are relatively resistant.
- (14447) IKEZAKI, Y., 2001. The extinct and seriously endangered species of insects in Nagasaki prefecture. *Nature & Insects* 36(11): 23-25. (Jap., with Engl. title). — (Author's address not stated). 5 insect spp. are dealt with, incl. *Mortonagrion Hirosei* and *Libellula angelina*.
- (14448) JOHNSON, R.K., T. WIEDERHOLM & D.M. ROSENBERG, 2001. Freshwater biomonitoring using individual organisms, populations and species assemblages of benthic macroinvertebrates. In: D.M. Rosenberg & V.H. Resh, [Eds], *Freshwater bio-monitoring and benthic macroinvertebrates*, pp. 40-158, Kluwer, Boston-Dordrecht-London. ISBN 0-412-02251-6. — (First Author: Envir. Impact Assessment Dept, Swed. Envir. Prot. Agency, P.O. Box 7050, S-750 07 Uppsala). Includes a review of taxa (incl. Odon.) used as sentinel organisms for metal pollution, a chapter on acidification with reference to odon., and a tabular review of tolerances of 28 selected palearctic and nearctic odon. spp. to organic pollution and acidification.
- (14449) MARDEN, J.H., G.H. FITZHUGH, M. GIRGENRATH, M.R. WOLF & S. GIRGENRATH, 2001. Alternative splicing, muscle contraction and intraspecific variation: associations between troponin T transcripts, Ca^{2+} sensitivity and the force and power output of dragonfly flight muscles during oscillatory contraction. *J. exp. Biol.* 204(20): 3457-3470. — (208 Mueller Lab., Dept Biol., Pennsylvania St. Univ., University Park, PA 16802, USA).
- The flight muscles of *Libellula pulchella* contain a mixture of 6 alternatively spliced transcripts of a single troponin T (TnT) gene. Here, it is examined how intraspecific variation in the relative abundance of different TnT transcripts affects the Ca^{2+} sensitivity of skinned muscle fibers and the performance of intact muscles during work-loop contraction regimes that approximate in vivo conditions during flight. The relative abundance of one TnT transcript, or the pooled relative abundance of two TnT transcripts, showed a positive correlation with a 10-fold range of variation in Ca^{2+} sensitivity of skinned fibers ($r^2=0.77$, $P<0.0001$) and a threefold range in peak specific force ($r^2=0.74$, $P<0.0001$), specific work per cycle ($r^2=0.54$, $P<0.0001$) and maximum specific power output ($r^2=0.48$, $P=0.0005$) of intact muscle. Using these results to reanalyze previously published data for wing kinematics during free flight, it is shown that the relative abundances of these particular transcripts are also positively correlated with wingbeat frequency and amplitude. TnT variation alone may be responsible for these effects, or TnT variation may be a marker for changes in a suite of co-regulated molecules. Dragonflies from 2 ponds separated by 16km differed significantly in both TnT transcript composition and muscle contractile performance, and within each population there are 2 distinct morphs that showed different maturational trajectories of TnT transcript composition and muscle contractility. Thus, there is broad intraspecific variability and a high degree of population structure for contractile performance phenotypes, TnT ribotypes and ontogenetic patterns involving these traits that affect locomotor performance.
- (14450) MÜLLER, J. & R. STEGLICH, 2001. Zum aktuellen Vorkommen der Flussjungfer (Gomphus et Ophiogomphus, Odonata) in der Elbe Sachsen-Anhalts. *Ent. Nachr. Ber.* 45(3/4): 145-150. (With Engl. s.). — (Second Author: Quittenweg 53, D-39118 Magdeburg). The occurrence of *G. flavipes*, *G. vulgatissimus* and *O. cecilia* in the Mittlere Elbe R., Sachsen-Anhalt, E Germany is outlined. Along with the presence of some other noteworthy spp., these spp. indicate a good quality of the Elbe R. environment.
- (14451) NATURE AND INSECTS (ISSN 0023-3218), Vol. 36, No. 7 (July 2001): *Threatened dragonfly species in Japan*. (Jap., with Engl. titles). Matsuki, K.: Threatened dragonfly species in Japan, 2 (pp. 2-4); — Kurashina, H. & N. Kikuya: A study for the decreasing cause of *Libellula angelina* [sic!] (pp.

- 5-9); — *Kano, K.*: The deteriorating situation of the endangered *Copera tokyoensis* Asahina in Japan (pp. 10-13); — *Karube, H.*: On the endangered species *Sympetrum maculatum* Oguma (pp. 14-16); — *Bungo, K.*: The present state and the protection of the dragonfly *Orthetrum poecilops miyajimaense* Yuki & Doi (pp. 17-19); — *Fukui, M. & A. Iwamoto*: A study of the way to breed *Libellula angelina* in the Okegayanuma, Iwata city (pp. 20-23); — *Nishu, S.*: The present situation of *Lestes japonicus* (pp. 24-25); — *Sasahara, S.*: On the status quo and conservation of *Rhyothemis severini* Ris (pp. 26-28). — (ERRATUM OA 13598: The *Nature and Insects* issue listed there is part of Vol. 35 rather than 36, as erroneously stated.)
- (14452) PRASAD, M. & P.P. KULKARNI, 2001. [Fauna of Nilgiri Biosphere Reserve] Insecta: Odonata. *Fauna Conserv. Area Ser. zool. Surv. India* 11: 73-83. — (First Author: Zool. Surv. India, M-Block, New Alipore, Calcutta-700 053, India). Based on literature and on recent ZSI surveys, 72 spp. are listed, with locality data and information on their habitats; — Nilgiri Hills, S India.
- (14453) PROT, J.-M., 2001. *Atlas commenté des insectes de Franche-Comté*. Tome 2. *Odonates zygoptères et anisoptères*. Office Informat. éco-entomol. Franche-Comté, Mus. Hist. Nat. La Citadelle, Besançon. vii+185 pp. Softcover (16.0x24.0 cm). ISBN 2-9511077-1-4. Price: € 24.- postage incl. — (Orders to: SFO, 7 rue Lamartine, F-78390 Bois-d'Arcy). A standard atlas of the odon. fauna of Burgundy (75 spp., of which 65 autochthonous), containing the information on ecology, distribution (with maps), adult phenology (with graphs), and on the status of all spp. The additional comments, field portraits and a regional bibliography are also provided.
- (14454) REINHARDT, K. & J. NAUMANN, 2001. Ergänzungen zur Libellenfauna des Mittleren Saaletales (Insecta: Odonata). *Thür. faun. Abh.* 8: 59-61. (With Engl. s.). — (Second Author: St.-Jacob-Str. 18, D-07743 Jena). 27 spp. are recorded from 17 localities; central Saale Valley, Thuringia, E Germany. *Erythromma viridulum*, *Anax imperator*, *Sympetrum pedemontanum* and *S. vulgatum* are shown to be able to complete the development within a single year.
- (14455) RESH, V.H. & E.P. McELRAVY, 2001. Contemporary quantitative approaches to biomonitoring using benthic macroinvertebrates. In: D.M. Rosenberg & V.H. Resh, [Eds], *Freshwater biomonitoring and benthic macroinvertebrates*, pp. 159-194, Kluwer, Boston-Dordrecht-London. ISBN 0-412-02251-6. — (First Author: Dept Ent. Sci., Univ. California, Berkeley, CA 94720, USA). A sample of 35 contemporary lotic and lentic studies, reporting on odon., was analysed with reference to the taxonomic level of identification. For lotic (lentic) habitats the percentages of identification to various levels are as follows: order only 29 (24), family 27 (10), genus 14 (38), and to the sp. level 29 (28)%.
- (14456) ROSENBERG, D.M. & V.H. RESH, [Eds], 2001. *Freshwater biomonitoring and benthic macroinvertebrates*. Kluwer, Boston-Dordrecht-London. xx+488 pp. Hardcover (15.5x24.0 cm). ISBN 0-412-02251-6. Price: € 197.- net. — (Publishers: Distribution Centre, Kluwer Acad. Publishers, P.O. Box 322, NL-3300 AH Dordrecht). The book is a collection of papers, describing recent developments in the biomonitoring of fresh water using benthic macroinvertebrates, and identifies future directions in order to provide an up-to-date source of information for those involved with water quality monitoring programs. It provides information that will enable the use of benthic macroinvertebrates to maximum effect. — For papers containing the information on odon., see OA 14439, 14448, 14455.
- (14457) SAMWAYS, M.J., 2001. Seychelles fineliner damselfly not extinct after all. *Phelsuma* 9: 55. — (Sch. Bot. & Zool., Univ. Natal, P/Bag X01, Scottsville-3209, Pietermaritzburg, SA). *Teinobasis alluaudi* (Martin, 1896) was recorded from Mahé in 1894 and 1909 and on Silhouette in 1908. It was feared extinct, not having been seen since 1909. On 27-VI-1997 it was rediscovered on SE Mahé, by a small stream in Terminalia forest, at sea level. — For its biology see OA 14501.
- (14458) SCHLUPMANN, M., 2001. Beobachtungen zur Phänologie der Libellen-Imagines im nördlichen Sauerland (Odonata). *Ent. Nachr. Ber.* 45(3/4): 171-179. (With Engl. s.). — (Hirseier Weg 18, D-58119 Hagen). Flight periods in northern Sauerland, Germany are stated for 31 spp. Temporal succession of several of them is obvious and precisely documented.
- (14459) TAGUCHI, M., 2001. Odonata as a biotic indi-

- cator and an evaluation of the quality of the environment. *J. practical Educ. Biol.* 2001 (Aug.): 17-23. (Jap., with Engl. s.). — (Yaei-Higashi High Sch., Sahamihara, Kanagawa, 229-0029, JA).
- A report on the results of an investigation of the odon. as a biotic indicator for the assessment of environmental quality in the agricultural fields where no chemical sprays are used.
- (14460) TAGUCHI, M., 2001. Odonata in Satoyama. *Nature & Insects* 36(12): 10-13. (Jap., with Engl. title & vernacular nomencl.). — (Yaei-Higashi High Sch., Sahamihara, Kanagawa, 229-0029, JA). [Abstract not available.]
- (14461) THORP, J.H. & A.P. COVICH, [Eds], 2001. *Ecology and classification of North American freshwater invertebrates*. [2nd edn]. Academic Press, San Diego-San Francisco-New York-Boston-London-Sydney-Tokyo. xvi+1056 pp. ISBN 0-12-690647-5. Geared toward professional researchers and graduate students, the book presents modern coverage of the biology, ecology and taxonomy of freshwater invertebrates found in the US and Canada. The odon. chapter is authored by W.I. Hilsenhoff (Dept Ent., Univ. Wisconsin, Madison, WI 53706, USA). It includes bibliographic references to species keys for identification of larvae, organised per region and per family.
- (14462) WALLASCHEK, M., 2001. Zur Insekten- und Herpetofauna (Odonata, Dermaptera, Blattoptera, Saltatoria: Ensifera et Caelifera, Amphibia, Reptilia) von Trocken- und Feuchtgebieten im Landkreis Eichsfeld (Thüringen). *Thür. faun. Abh.* 8: 7-36. (With Engl. s.). — Agnes-Gosche-Str. 43, D-06120 Halle/Saale). Includes a commented list of 22 odon. spp., with ecological and biogeographical analysis of the fauna and information on the local adult phenology; — Thuringia, E Germany.
- (14463) WEATHERHEAD, M.A. & M.R. JAMES, 2001. Distribution of macroinvertebrates in relation to physical and biological variables in the littoral zone of nine New Zealand lakes. *Hydrobiologia* 462: 115-129. — (Natl. Inst. Water & Atmosphere Res., P.O. Box 8602, Christchurch, NZ). A multiple regression approach was taken to relate macroinvertebrate community composition and habitat characteristics, based on 51 sampling sites from the mainly oligotrophic lakes in North and South Island.
- Abundance of Odon. (Gastropoda and Trichoptera) was positively related to macrophyte biomass. No species names are stated.
- (14464) YAMAMOTO, Y., 2001. Intraspecific forms and their geographical distribution of *Mnais nawai* Yamamoto (Odonata, Calopterygidae) in inner zone of Southwest Japan. *Gekkan-Mushi* 368: 32-37. (Jap., with Engl. title). — (Nijigaoka 2-7-6-704 Meitô-ku, Nagoya-shi, Aichi, 465-0078, JA). [Abstract not available.]
- 2002**
- (14465) (Anonymous), 2002. [De dreentse Peizermaden]. Knisperende libel. *Grasduinen* 2002 (July): 70. (Dutch). *Aeshna viridis* is reported from the Peizermaden, Drente, the Netherlands. The Gouwe R. is mentioned as one of the localities.
- (14466) AGRION, PURLEY. Newsletter of the Worldwide Dragonfly Association (ISSN 1476-2552), Vol. 6, No. 2 (July, 2002). — (c/o J. Silsby, 37 Astoria House, 116 High St., Purley, Surrey, CR8 2XT, UK). [Signed articles:] Corbet, P., M. May & M. Parr: Prospects for WDA (p. 13); — Parr, M.: Collecting dragonflies: the Association's view (p. 14); — *News from members* (pp. 15-16); — *Members' reminiscences* (pp. 17-21; with contributions by P. Corbet, R. Hoess, M. Parr, R. Jödicke, V. Clausnitzer, J. Taylor, M. Härmäläinen and J. Silsby); — Härmäläinen, M.: [book review] The dragonflies of Finland, by S. Karjalainen (p. 22); — W.D.A Code of practice for collecting dragonflies (pp. 22-23); — Hawking, J.: 3rd WDA international symposium of odonatology (p. 24).
- (14467) (am), 2002. Kačji pastirji so med najbolj ogroženimi [žuželkami v občini Cerkevjak]. — [Dragonflies are among the most threatened insects in the municipality of Cerkevjak]. *Večer*, Maribor 58(161): 18, issue of 16 July. (Slovene). An occasional article in a provincial daily, on the Youth Research Workshop, "Ščavnica 2002", conducted in the area of Cerkevjak (Styria, E Slovenia), with emphasis on dragonflies; 33 spp. were recorded.
- (14468) ARGIA. The news journal of the Dragonfly Society of the Americas (ISSN 1061-8503), Vol. 14, No. 3 (25 Sept. 2002). — (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA). [Scientific articles:] Paulson, D./Dunkle, S.W.:

- Honorary members of the Dragonfly Society of the Americas / Minter J. Westfall, Jr, George H. Bick, Philip S. Corbet (pp. 3-6); — *Donnelly, N.*: DSA northeastern field trip to the Tug Hill Plateau, New York (p. 6); — *O'Brien, M.*: Highlights from the Great Lakes Odonata Meeting, Higgins Lake, MI, July 1-4, 2002 (pp. 6-10; records); — *Pfeiffer, B.*: *Williamsonia fletcheri* encountered in Vermont (pp. 10-11); — *Callin, P.M.*: Pygmy snaketail (*Ophiogomphus howei*), new to Canada (pp. 11-12); — *Paulson, D.*: New state records of *Enallagma* from Minnesota and New Hampshire (p. 12); — *Beckmeyer, R.*: Some Odonata records for the Oxley Nature Center, Tulsa Co., Oklahoma (pp. 12-13); — *Curry, J.*: Observations on *Neocordulia* (pp. 13-14); — *Daigle, J.J.*: Nick-at-night: episode II (pp. 14-15; Nicaragua records); — *Trapero Quintana, A. & C. Naranjo López*: New locality records for Odonata in Pico Cristal National Park, Cuba (pp. 15-16); — *Larsen, R.*: Some notes on the cultural history of dragonflies (pp. 16-17); — *Bried, J.*: Miscellaneous Mississippi (pp. 17-18; records); — *Lederer, P.*: Damselfly "pancake net" made with fiberglass screening material (pp. 18-19); — *Dunkle, S.*: 2002 DSA meeting minutes (pp. 19-20; incl. a note on range expansion of 6 spp. in N. America).
- (14469) *AUSTROLESTES*. Newsletter of the Australian Dragonfly Society, No. 5 (winter 2002; mailed Oct. 2002). — (c/o D. Reeves, 30 Bramston Terrace, Herston, Qld 4006, AU).
Reeves, D.: From the President (p. 1); — *Hawking, J.*: 3rd WDA International Symposium of Odonatology (p. 2); — *Orr, A.G.*: Photographing dragonflies in tropical rainforest (p. 3); — *Anonymous*: Species profile: Jade Hunter, *Austrogomphus ochraceus* (Selys, 1869) (p. 3, with 2 col. photos); — Key to the species of *Orthetrum* Newman (p. 4; reproduced from 'The Australian dragonflies', by J.A.L. Watson et al., with a footnote by the Ed.).
- (14470) *BAAIJENS, A.*, 2002. Opvallende waarnemingen in 2002. — [Noteworthy observations in 2002]. *Zeeuwse Prikkebeen* 10(2): 18-22. (Dutch) — (Grote Abeele 40, NL-4388 VW Oost-Souburg).
 Notes on the local status (Zeeland prov., the Netherlands) of *Coenagrion puella*, *Pyrrhosoma nymphula*, *Sympecma fusca*, *Gomphus pulchellus*, *Cordulia aenea*, *Crocothemis erythraea* and *Sympetrum fonscolombii*. Recently, the number of localities and the abundance of *C. puella*, *S. fusca* and *C. erythraea* are notably increasing in the province.
- (14471) *BATTEGAZZORE, M. & A. MORISI*, 2002. Macroinvertebrati bentonici utilizzati per valutare l'evoluzione degli effetti a breve termine di una immissione di idrocarburi in un corso d'acqua alpino. *Studi trent. Sci. nat. (Biol.)* 78(1): 235-238. (With Engl. s.). — (Depto di Cuneo, ARPA Piemonte, Via D'Azeglio 4, I-12100 Cuneo).
 The macrobenthonic communities were monitored after a hydrocarbon spill into the Stura di Demonte R. at Cuneo, Piedmont, N Italy (8-I-2000). At 2 of the 4 sampling stations *Onychogomphus* occurred prior to the spill, while it was missing in the Jan. and Feb. 2001 samples.
- (14472) *BAZYLUK, W.*, 2002. Materiały do fauny ważek (Odonata) okolicy Siemienia w województwie lubelskim. — Material to the fauna of dragonflies (Odonata) in the vicinity of Siemień in the Lublin province [sic!]. *Nowy Pam. Fizjogr.* 1(1): 45-52. (Polish, with Engl. s.). — (Author deceased in 1988; the paper is based on a draft prepared in the 1950s, which was restyled for publication by author's widow, Anna Liana).
 39 spp., collected during 1941-1944 and deposited in Mus. Zool., Polish Acad. Sci., are brought on record. The ecological composition of the fauna of the district is analysed.
- (14473) *BEDJANIĆ, M.*, 2002. Dragonflies collected in Sri Lanka during January and February 1995 (Odonata). *Opusc. zool. flumin.* 205: 1-22. — (Fram 117/a, SI-2313 Fram).
 An annotated list of 53 taxa collected at 22 localities is given. The record of *Agriocnemis cf. femina* confirms the occurrence of the taxon on the island and raises the question of the taxonomic treatment of the *A. femina* species/subspecies complex. For the endemic *Drepanosticta brinckii* Lieft., known previously only from the type series, information additional to the original description is provided. Interesting new records of the endemic *Elatoneura bigemmata* Lieft., known only from the holotype ♂, are also presented. The allotype ♀ is described and figured for the first time, and information additional to that in the original description of the ♂ is given. Larval records of 3 of the 18 recorded endemic taxa, namely *Heliogomphus* sp., *Paragomphus henryi* (Laidl.) and *Epophthalmia vittata cyanocephala* Hag., are briefly discussed. A general analysis of the species phenology has shown that, in the "dry season" between January and March, the adults of most endemic odon. spp. of the Platystictidae,

Gomphidae and Corduliidae are absent.

- (14474) BEDJANIČ, M., 2002. [Lestes sponsa from Cerknica lake]. In: B. Ogorelec, Regijski park Snežnik. *Kras* 52: 35. (Slovene). — (Fram 117/a, SI-2313 Fram). A phot., with caption; — Inner Carniola, Slovenia.
- (14475) BEDJANIČ, M., 2002. Rastlinstvo in živalstvo. — [Plant and animal world of Plešivec]. In: T. Turičnik, [Ed.], *Gozdno-turistična pot Plešivec*, pp. 27-32, Turistično društvo & Zavod za gozdove Slovenije, Slovenj Gradec, ISBN 961-90653-5-2. (Slovene). — (Fram 117/a, SI-2313 Fram). *Cordulegaster bidentata* is mentioned (and photographed) from Plešivec (= Uršlja gora), Carinthia, Slovenia.
- (14476) BEDJANIČ, M., 2002. Raziskovanje žuželk. — [Insect research]. *Panorama*, Slov. Bistrica 13(32): 10. (Slovene). — (Fram 117/a, SI-2313 Fram). A brief report on the 1-7 July 2002 Youth Field Workshop in the Makole area, Haloze, Slovenia. 34 odon. spp. were identified, but they are not listed here.
- (14477) BERNARD, R., 2002. Zalotny lot zalotki. — [The coquettish flight of Leucorrhinia]. *Kronika Miasta Poznania* 2002(3): 101-108; bibliographic references in the cumulative bibliography for the entire issue, on pp. 328, 338-339, 342, 344-345. (Pol.). — (Dept Gen. Zool., Mickiewicz Univ., Fredry 10, PO-61.701 Poznan). An outline is presented of the dragonfly life of the city of Poznan, Poland. So far 55 spp. were recorded. Of interest are local populations of *Epitheca bimaculata*, *Leucorrhinia albifrons*, *L. caudalis* and records of *Aeshna affinis*, *A. viridis*, *Orthetrum brunneum* and *Sympetrum fonscolombei*. A checklist is not supplied.
- (14478) BERNATH, B., G. SZEDENICS, H. WILDERMUTH & G. HORVÁTH, 2002. How can dragonflies discern bright and dark waters from a distance? The degree of polarisation of reflected light as a possible cue for dragonfly habitat selection. *Freshw. Biol.* 47: 1707-1719. — (Third Author: Haltbergstr. 43, CH-8630 Rüti). Based on the findings that some dragonflies prefer either 'dark' or 'bright' water (as perceived by the human eye viewing downwards perpendicularly to the water surface), while others choose both types of water bodies in which to lay their eggs, the question arises: How can dragonflies distinguish a bright from a dark pond from far away, before they get sufficiently close to see it is bright or dark? — The Authors' hypothesis is that certain dragonfly species may select their preferred breeding sites from a distance on the basis of the polarisation of reflected light. Is it that waters viewed from a distance can be classified on the basis of the polarisation of reflected light? — Therefore, the reflection-polarisation characteristics of several ponds differing in brightness and in their dragonfly fauna was measured at an angle view of 20° from the horizontal. It is shown that from a distance, at which the angle of view is 20° from the horizontal, dark water bodies cannot be distinguished from bright ones on the basis of the intensity or the angle of polarisation of reflected light. At a similar angle of view, however, dark waters reflect light with a significantly higher degree of linear polarisation than bright waters in any range of the spectrum and in any direction of view with respect to the sun. — Thus, the degree of polarisation of reflected light may be a visual cue for the polarisation-sensitive dragonflies to distinguish dark and bright water bodies from far away. Future experimental studies should prove if dragonflies do indeed use this cue for habitat selection.
- (14479) BOUDOT, J.-P. & G. JACQUEMIN, 2002. *Inventaire et statut des libellules de Lorraine*. Soc. Lorraine Ent. Nancy. iv+68 pp. Softcover (20.5x29.5 cm). ISBN none. Price: € 7.- net. — (Orders to: SFO, 7 rue Lamartine, F-78390 Bois-d'Arcy). A commented distribution atlas (Lorraine, France: 66 spp.), with regional bibliography.
- (14480) BRACHYTRON (ISSN 1386-3460), Vol. 6, No. 1 (Oct. 2002). (Dutch). — (c/o G. Abbingh, Muddegoorn 78, NL-9403 NK Assen). A special issue, presenting 9 selected dragonfly areas in the Netherlands: *Anonymous*: Dragonfly watching in the Netherlands (p. 3); — *Abbingh, G.*: The Dwingelderveld (pp. 4-6); — *Uilhoorn, H.M.G. & E.J. Ruiter*: The Weerribben (pp. 7-9); — *Wasscher, M. & T. de Groot*: The Vechtplas (pp. 10-12); — *Ketelaar, R., W. Verberk & J. Rademaker*: Het Korenburgerveen (pp. 13-15); — *Dijkstra, K.-D.B.*: Voornes Duin (pp. 16-18); — *Sommer, H.*: The Kop van de Oude Wiel and the Avelingen (pp. 19-21); — *van der Heijden, A.E.*: The Plateaux (pp. 22-24); — *Slaats, J.*: Deurnesche Peel (pp. 25-27); — *van Buggenum, H.*: Zuid-Limburg (pp. 28-30).
- (14481) BRODIN, T. & F. JOHANSSON, 2002. Effects

- of predator-induced thinning and activity changes on life history in a damselfly. *Oecologia* 132(2): 316-322. — (Dept. Ecol. & Envir. Sci., Univ. Umeå, S-90187 Umeå).
- The influence of the lethal and non-lethal presence and absence of a fish predator (*Perca fluviatilis*) on behaviour, numbers emerging, size at emergence and development rate of *Lestes sponsa* was investigated in outdoor artificial ponds and spanned from the egg stage to emergence. During the experiment food resources for the damselflies were continuously monitored. Damselflies exposed to a lethal predator showed a significantly lower activity level than those in the absence of predators or subjected to a non-lethal predator. Half-way through the larval stage the reduction in activity level was correlated with the presence of lethal predators, and at the end of the larval stage with higher zooplankton densities. Though larvae decreased activity level, size at emergence was larger and development time faster for individuals in the lethal predator treatment. Since fewer larvae emerged from that treatment we interpret the larger size at emergence to be an effect of a combination of thinning and higher zooplankton densities.
- (14482) *BULLETIN OF AMERICAN ODONATOLOGY* (ISSN 1061-3781), Vol. 6, No. 3 (25 Sept. 2002). — (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).
Beckemeyer, R.J.: Odonata in the Great Plains states: patterns of distribution and diversity (pp. 49-99; 320 spp. recorded from the 13 states, with a significant latitudinal gradient in species richness in the Central Great Plains. 4 faunal groups were identified, viz. Texas; Kansas-Oklahoma, Nebraska-S Dakota-Colorado-Iowa; and N Dakota. 43% of the fauna is of eastern origin; the Texas tropical spp. contribute 14% of the Great Plains total).
- (14483) CARLE, F.L. & K.M. KJER, 2002. Phylogeny of *Libellula* Linnaeus (Odonata: Insecta). *Zootaxa* 87: 1-18. [On-line edn: down-loadable pdf file at: <http://www.mapress.com/zootaxa/2002/z000087.pdf>]. — (Dept Ent., Cook Coll. Rutgers, St. Univ. New Jersey, 93 Lipman Dr., New Brunswick, NJ 08901, USA). 242 morphological characters were used. The taxon sample included 31 *Libellula* and libelluline spp., and further representatives from all libellulid sfam., from all Anisopt. superfam. and Epiophlebia. The Corduliinae are shown to be paraphyletic even among genera characterized by a well developed anal loop bisector.
- The Sympetrini are polyphyletic with *Crocothemis*, forming a sister group to the Libellulini. The traditional placement of *Tramea*, far from Libellulini, is questioned; here it is placed as a sister group of *Crocothemis*+Libellulini. Kennedy's *Libellula* phylogeny is largely corroborated, with 2 exceptions, viz. (1) the sgen. *Libellula*, *Eolibellula* and *Syntetrum* form a monophyletic sister group to a clade including *Belonia*, *Holotania*, *Neotetrum* and *Eotainia* sgen. n. (type sp.: *Mesothemis composita* Hag.); — and (2) *Eothemis* is a sister group of *Ladona* rather than *Neotetrum*. In addition, the monophyly of *Belonia* is confirmed, and *Platetrum*+*Plathemis* represent a monophyletic sister group of *Ladona*+*Eurothemis*. These 4 sgen. together form a sister group of *Libellula* s.s.
- (14484) CARLETTI, B. & F. TERZANI, 2002. Nota sul *Cordulegaster trinacriae* (Waterston, 1976) (Insecta, Odonata, Cordulegastridae). *Quad. Studi Stor. nat. Romagna* 16(Suppl.): 1-4. (With Engl. s.). — (First Author: Viale Raffaello Sanzio 5, I-50124 Firenze). Abdominal segments 8-10 of adult *C. trinacriae* and *C. b. boltonii* are figured and compared.
- (14485) CARRON, G., 2002. *Leucorrhinia albifrons* (Burmeister, 1839), nouvelle espèce de libellule (Odonata) pour le canton de Genève. *Bull. romand Ent.* 20(1): 45-49. — (C.P. 250, CH-2002 Neuchâtel). 1 ♂, Moulin-de-Vert (Cartigny), 17-VIII-2000. This is the first record for the canton of Geneva, Switzerland. The habitat is described in detail.
- (14486) CAUCHIE, H.-M., 2002. Chitin production by arthropods in the hydrosphere. *Hydrobiologia* 470: 63-96. — (CRP-Gabriel Lippmann, CREBS, 162 a av. de la Faiencerie, L-1511 Luxembourg).
 The importance of chitin production corresponding to the formation of exuviae and peritrophic membranes in arthropods and chitin production by non-arthropod organisms in the chitin budget of aquatic ecosystems is highlighted and discussed. Estimations of the odon. annual chitin production amounts to 17 (lentic waters) and 9 (lotic waters) mg chitin m⁻² yr⁻¹.
- (14487) CODURRI, M. & M. PAVESI, 2002. Ordine Odonata. In: F. Mason et al., [Eds], *Invertebrati di una foresta della Pinura padana: Bosco della Fontana*, 1, pp. 49-50, Arcari, Mantova, ISBN 88-88499-03-2. — (First Author: Viale Gobio, I-46100 Mantova).
 The Bosco della Fontana Nature Reserve is situated within the boundaries of Marmirolo, Mantova prov.,

Lombardy, Italy, alt. 25 m, surface ca 268 ha. 29 spp. are listed.

- (14488) DENOBEL, W.T., J.H. BOUWMAN, H. VAN KLEEF & A.J.J. LEMAIRE, 2002. *Beleidsmonitoring OBN-fauna 2001*. — [Fauna monitoring for the management of the "Forest and Nature Survival" project, 2001]. Ver. Onderz. Flora & Fauna, Nijmegen [VOFF-Rapp. 2001/01]. 92 pp. (Dutch). — (VOFF, P.O. Box 9010, NL-6500 GL Nijmegen).

33 odon. spp. were identified from 41 selected wetland localities and various habitats. Locality names are stated, but their geographical locations are not specified; — the Netherlands.

- (14489) *DIGEST OF JAPANESE ODONATOLOGICAL SHORT COMMUNICATIONS*, No 13 (Sept. 2002). — Translated, edited and produced by N. Ishizawa (1644-15, Yamaguchi, Tokorozawa, Saitama, 359-1145, JA).

Sonehara, I.: An ecology of *Sympetrum danae* Sulzer (pp. 1-4); — *Sato, Y.*: Wonders of *Calopteryx cornelia* Selys (pp. 4-10).

- (14490) *DRAGONFLY NEWS*. The newsletter of the British Dragonfly Society (ISSN none), No. 41 (spring 2002), No. 42 (autumn 2002). — (c/o D. Hepper, 31 High Park Rd, Farnham, Surrey, GU9 7JJ, UK). Under traditional headings, in numerous notes, reports and announcements, all aspects of the BDS's life and activities are covered. Some selected titles: (No. 41:) *Corbet, P.*: Seasonal regulation (p. 5); — *Goodger, D.*: The Odonata Collection of the NHM (i.e. BMNH; p. 5); — *Beynon, T.*: Optics for dragonfly-watching (p. 14); — *Gennard, D.*: Odonatological research in higher education (pp. 15-16); — *Mackenzie Dodds, R.*: Goodbye National Dragonfly Museum (p. 22). — [No. 42:] *Parr, A.*: Migrants & vagrants: early news (p. 17); — First and last dates (pp. 17-18); — *Gennard, D.*: Research update (p. 19); — *Freeland, J.*: Genetic research on museum specimens (pp. 19-20); — *Anonymous*: Honours for members (p. 22; P.S. Corbet and N.W. Moore). — With the issue go the inlay documents: *Hunting aliens: what to do on a winter day. A page for the young and the young at heart* (2 pp.); — and *BDS accounts for year ending 31 March 2002* (2 pp.).

- (14491) DUMONT, H.J., 2002. Impoverished freshwater fauna of Easter Island. *Rapa Nui J.* 16(1): 29-30. — (Inst. Anim. Ecol., Univ. Gent. Ledeganckstraat 35, B-9000 Gent).

A reference is made to *Pantala flavescens*, the sole odon. sp. that ever existed on the island. The fact that, at times, it shows an atypical behaviour here does not exclude the possibility that it was a recent arrival on the island.

- (14492) ENGLUND, R.A., 2002. The loss of native biodiversity and continuing nonindigenous species introductions in freshwater, estuarine and wetland communities of Pearl Harbor, Oahu, Hawaiian islands. *Estuaries* 25(3): 418-430. — (Hawaii Biol. Surv., Bishop Mus., 1525 Bernice St., Honolulu, HI 96817, USA).

The benthic invertebrates and fishes were sampled from 1997 to 1998. Out of 191 spp., nonindigenous spp. dominated (48%), whereas 33% were native, and 19% of spp. are of unknown origin. 5 nonindigenous odon. spp. are listed. Among these, *Enallagma civile*, *Ischnura posita*, *Crocothemis servilia* and *Orthemis ferruginea* are considered to have been introduced through aquarium release or with aquarium plants. *Ischnura ramburii* has been introduced by means of the airplane.

- (14493) *ERJAVECIA*. Bulletin of the Slovene Odonatological Society (ISSN 1408-8185), No. 14 (31 Oct. 2002). (Slovene). — (c/o M. Bedjanič, Fram 117/A, SI-2313 Fram).

In the feature article, by *B. Kiauta* (pp. 1-4), the 1899 visits of F. Klapálek (1863-1919) to Slovenia are outlined. Most of the issue is concerned with the provisions of the recently promulgated Red List of Slovenia (pp. 9-16). *M. Bedjanič* is reporting on the results of the 2002 Field Workshops in Ščavnica and Mislinja (pp. 4-9), and on the bivoltine development of *Erythronma najas* and *Sympetrum depressiusculum* in Slovenia (pp. 17-18). *M. Bedjanič* & *M. Kotarac* are referring to the dragonfly postal stamp, issued in Slovenia on 9 May 2000, designed by A. Čufer (pp. 21-22). Nos 441-468 are added to the Slovene odonatol. bibliography (*M. Bedjanič*; pp. 22-24).

- (14494) FLECK, G., 2002. Une larve d'odonate remarquable de la Guyane française, probablement *Lauromacromia dubitalis* (Fraser, 1939) (Odonata, Anisoptera, "Corduliidae"). *Bull. Soc. ent. Fr.* 107(3): 223-230. (With Engl. & Germ. s's). — (Zool. Mus. A. Koenig, Adenauerallee 160, D-53115 Bonn). The larva is described and illustrated. Its features demonstrate that *Lauromacromia* cannot be considered as a *Gomphomacromiidae* sensu Carle (1995), since the rectorial setae on the labial palp are a clear synapomorphic character of the "Macromiid-Corduliid-Libel-

- lulid-complex" sensu Carle, 1995 (= Valvulida sensu Lohmann, 1996 = Trichodopalpida sensu Bechly, 1995).
- (14495) FLIS, J., 2002. *Načrt ozelenjevanja nasipa pepela. Ozelenjevanje brežin ob in na odlagališču produktov razveplanja TEŠ*. — [Verdancy creation on the slopes of the desulphurization products deposit of the thermoelectric plant Šoštanj, Slovenia: verdancy project for the ash embankment]. 57 pp. ERICO, Velenje. (Slovene). — (c/o F. Avberšek, Director, ERICO Velenje, Koroška 58, SI-3320 Velenje).
With reference to the work listed in OA 14445, the adults of 27 odon. spp. were identified (2000-2001) at the site and its immediate vicinity. Their local occurrence and habitat requirements are species-wise outlined (pp. 36-57).
- (14496) FORNI, G., G. GOMMARASCHI & A. OCCHIPINTI AMBROGI, 2002. Definizione dello stato di conservazione di alcuni fontanelli del Parco Agricolo Sud-Milano attraverso lo studio della comunità macrobentonica. *Studi trent. Sci. nat. (Biol.)* 78(1): 149-156. (With Engl. s.). — (Dipto Genet. & Microbiol., Sez. Ecol., Univ. Pavia, Via S. Epifanio 14, I-27100 Pavia).
By means of biotic indices, the conservation status of 7 springs in the South-Milano Agricultural Park was assessed. The odon. densities are shown in a graph, but a species list is not provided. The genera mentioned are Calopteryx, Cordulegaster, Ischnura and Lestes.
- (14497) FUTAHASHI, R., H. FUTAHASHI & Y. ARAKI, 2002. Recent conditions of Odonata fauna at Midarchashi-ike pond (Himi-shi, Toyama pref., Japan) and problems of its conservation. *Bull. Toyama Sci. Mus.* 25: 141-145. (Jap., with Engl. title; Jap. nomenclature). — (First Author: 6-1-35-301, Nishihara, Kashiwa, Chiba, 277-0885, JA).
[Abstract not available.]
- (14498) GEENE, P., 2002. Libellenexcursie Zeepe-
duinen. — [Dragonfly field trip to Zeepe-
duinen, Zeeland prov., the Netherlands]. *Zeeuwse Prikkebeem* 10(2): 9-11. (Dutch). — (Halve Maanstraat 57, NL-4356 BN Oostkapelle).
Records of 10 spp., 1-VI-2002.
- (14499) GRACILE. [Newsletter of Odonatology], Osaka (ISSN 1344-123X), No. 64 (31 March 2002). (Jap., with Engl. titles). — (c.o. K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka 545-0004, JA).
Shimura, S.: Eggs of *Pseudagrion microcephalum* (pp. 1-2, col. pl. incl.); — *Tsuda, S.*: Notes on the names of some Japanese dragonflies, 4 (pp. 3-8); — *Sasamoto, A.*: Records of *Aeschnophlebia anisoptera* in Nara Basin, Nara pref. (p. 9); — *Tsuda, S.*: Small records of *Orthetrum sabina* in Oita pref. (p. 10); — *Katatani, N.*: Report of the survey trip on the odonate fauna of Mt Kongo, Osaka and Nara prefs, 3: in spring 2001 (pp. 11-13); — *Tani, K. & N. Doi*: Report on the survey trip on the odonate fauna of Mt Kongo, Osaka and Nara prefs, 4: in early summer 2001 (pp. 14-17); — *Matsuda, I.*: Report of the survey trip on the odonate fauna of Mt Kongo, Osaka and Nara prefs, 5: in summer 2001 (pp. 18-20); — *Inoue, K.*: Report of the survey trip of the odonate fauna of Mt Kongo, Osaka and Nara prefs, 6: in autumn 2001 (pp. 20-23); — *Tabata, O.*: Mt Kongo burnt my heart in 2001 (pp. 26-27); — *Matsuda, I.*: "Tombo-tsuri" (catching dragonflies by threads and stones) meeting held in Osaka pref., 8: 2001 (pp. 28-30); — *Kanazawa, I.*: Report of the field survey on *Mortonagrion hirosei* in Yodo R. in Osaka pref. (p. 31); — *Morioka, Y.*: Report of the survey trip on the odonate fauna of the northern part of Osaka pref.: *Aeshna nigroflava* (pp. 32-35); — *Matsuda, I.*: Report of the opening ceremony of the Nature Museum, "Chihaya Nature and Astronomy Museum", on Mt Kongo, Osaka pref. In April 2001 (pp. 36-37); — *Inoue, K.*: Odonate specimens to be donated to the Nature Museum on Mt Kongo, collected until the end 2001 (pp. 38-39).
- (14500) GROPPALI, R. & E. RISERVATO, 2002. Considerazioni sull'impiego degli odonati adulti come bioindicatori della qualità degli ambienti lenticici. *Studi trent. Sci. nat. (Biol.)* 78(1): 247-249. (With Engl. s.). — (Lab. Conserv. Natura & Ecol. Invert., Univ. Pavia, Via S. Epifanio 14, I-27100 Pavia).
The relationships between the odon. and aquatic vegetation are outlined, and their indicative value for the environmental quality assessment is emphasized.
- (14501) HARDING, D. & J. THOMPSON, 2002. Habitat use by the Seychelles fineliner damselfly (*Teinobasis alluaudi*) on Silhouette island, Seychelles. *Phelsuma* 10: 35-40. — (Sch. Biol. Sci., Univ. Sussex, Palmer, Brighton, BN1 9QJ, UK).
In 2002, research on the island located 4 sites for this sp., providing new data on appearance, vegetation use by teneral and adults, colour development, and oviposition. Apparent preference for alien vegetation (*Clidemia hirta*, *Paraserianthes falcata*) is attributed

to ♂♂ preferring an open vegetation structure. — See also OA 14457.

- (14502) HEIDARI, H. & H.J. DUMONT, 2002. An annotated check-list of the Odonata of Iran. *Zoology in the Middle East* 26: 133-150, 1 map excl. (With Germ. s.). — (First Author: Plant Pests & Diseases Res. Inst., Chamran Park Way, Tehran-19395, Iran). A perusal of the literature and study of some additional collections leads to a list of 95 spp. and spps.; at least another 15 eurosiberian and oriental spp. await discovery. Eurosiberian spp. dominate in the NW and along the Caspian coast; as one moves S in W Iran, Middle-East endemics become more prominent, and a limited admixture of afrotropical spp. occurs. The central desert axis is a zoogeographical break, in which predominantly Irano-Turanian spp. are found. E of it, Irano-Turanians mix with oriental elements. The oriental element is particularly strong along the Makran coast, where, additionally, a short series of spp. occurs with a full oriental-afrotropical range. The Zagros mts and their extensions in Sistan-Baluchistan facilitate dispersal across an otherwise arid area, but have been insufficiently studied. The same is true of the Kopet Dag, which provides a wedge between the Asian deserts, and acts as a filter for eurosiberian spp. to reach the high mountains of Afghanistan and, vice versa, allows Mesasiatic spp. to spread W. All these conclusions are at a qualitative level: large parts of Iran are still unstudied, and the mapping of the range of individual spp. remains to be done. E-W and N-S clines are common in *Calopteryx splendens* and other Zygopt., but remain to be worked out in detail.
- (14503) HEIDEMANN, H. & R. SEIDENBUSCH, 2002. *Larves et exuvies des libellules de France et d'Allemagne (sauf de Corse)*. Soc. fr. Odonatol., Bois-d'Arcy. 415 pp., 3 col. pls incl. Softcover (16.0x24.3 cm). ISBN 2-9507291-5-0. Price: € 28.- net, postage incl. — (Publishers: 7 rue Lamartine, F-78390 Bois-d'Arcy). A revised, updated and (also editorially) modified Fr. edn of the work described in OA 9273, with a Preface by J.-L. Dommange, and incl. some new figs. As in the original Germ. edn, "Cercion" lindenii is (correctly!) placed in Erythromma (though so far this has been overlooked by many workers), the Corduliidae are treated as a subfam. in the Libellulidae, Somatochlora meridionalis as a ssp. of S. metallica, etc. The Bibliography is thoroughly updated, a few minor errors, notably e.g. in fig. captions (pp. 76 & 254) and pl. titles (pp. 127, 129, 277), are selfexplanatory and will not hinder the reader in any way. — Hardly a decade after the original publication, the book became an indispensable classic for identification of the European larvae.
- (14504) IDF-REPORT. Newsletter of the International Dragonfly Fund (ISSN 1435-3393), Vol. 4, No. 1 (May 2002). — (c/o M. Schorr, Schulstr. 7 B, D-54314 Zerf). Vick, G.S.: Preliminary biodiversity assessment of the odonate fauna of the Takamanda Forest Reserve, Cameroon (pp. 1-10); — Clausnitzer, V.: Dragonflies of East Africa (pp. 11-17); — Kipping, J.: Dragonfly research in the Okavango Delta, Botswana (pp. 18-26); — Srivastava, D.S. & M.C. Melnychuk: Ground and canopy distribution of bromeliad-dwelling Mecistogaster modesta larvae (Odonata: Pseudostigmatidae) in a Costa Rican rainforest (pp. 27-30); — Supported projects of the International Dragonfly Fund e.V. 1996-2002 (pp. 31-32).
- (14505) INTERNATIONAL JOURNAL OF ODONATOLOGY (ISSN 1388-7890), Vol. 5, No. 2 (2 Oct. 2002). Dijkstra, K.-D.B.: The identity of the West African zygopterans Pseudagrion emarginatum and P. camerunense (Odonata: Coenagrionidae) (pp. 105-110); — Knaus, P. & H. Wildermuth: Site attachment and displacement of adults in two metapopulations of Somatochlora alpestris (Odonata: Corduliidae) (pp. 111-128); — Pfau, H.-K.: Tandem grip mechanics and tandem linkage shifting in Odonata: reconstruction of evolution and phylogenetic significance (pp. 129-179); — Sahlén, G. & F. Suhling: Relationships between egg size and clutch size among European species of Sympetrinae (Odonata: Libellulidae) (pp. 181-191; — Errata (pp. 192-194).
- (14506) JOURNAL OF THE BRITISH DRAGONFLY SOCIETY (ISSN none), Vol. 18, No. 1/2 (Sept. 2002). — (c/o Dr W.H. Wain, Haywain, Hollywater Rd, Bordon, Hants, GU35 0AD, UK). Ketelaar, R.: The recent expansion of the Small Red-eyed Damselfly Erythromma viridulum (Charpentier) in the Netherlands (pp. 1-8); — Clarke, D.: Growth and autumnal decline of feeding in captive-reared first-year larvae of the Azure Hawker Aeshna caerulea (Ström) (pp. 9-12); — Moore, N.W.: The dragonflies of a Cambridgeshire pond and its surroundings in 2001 (pp. 13-22); — Corbet, P.S. & S.H. Chowdhury: Voltinism in the Common Blue Damselfly Enallagma cyathigerum (Charpentier) in a Scottish loch: a preliminary study (pp. 23-39); — Parr, A.J.: Migrant and

- dispersive dragonflies in Britain during 2001 (pp. 40-45); — *Cham, S.*: Mate guarding behaviour during intense competition for females in the Common Blue Damselfly *Enallagma cyathigerum* (Charpentier) (pp. 46-48).
- (14507) [JURZITZA, G.], 2002. Vogel-Azurjungfer. *Hydrologie Wasserbewirtschaftung* 46(4): cover phot. + p. 200. — (Reinmuthstr. 27, D-76187 Karlsruhe). A cover phot. of *Coenagrion ornatum*, reproduced from the book listed in OA 6282, with an (anonymous) article, mostly based on personal information provided by Dr G. Jurzitza.
- (14508) KHROKALO, L.A. & E.V. DAVYDENKO, 2002. Notes on dragonflies (Insecta: Odonata) of Dnipropetrovsk region. *Ekologiya Noosferologiya* 2(1/2): 91-94. (With Ukr. & Russ. s's). — (Dept Zool., Fac. Biol., Shevchenko Univ., Volodymirska 64, UKR-01033 Kiev). A commented list of 14 spp. from Andriyivka, Novomoskovsk distr., with a checklist of the 21 spp. hitherto known from the region of Dnipropetrovsk, the Ukraine.
- (14509) KIAUTA, B., 2002. Snake associations in the European "dragonfly" folk appellations [...]. *Proc. 1st int. topical Conf. 'The Veneti within the ethnogenesis of the central-European population'*, pp. 199-200, Ljubljana. ISBN 961-6433-06-7. — (Available from: Slovenian World Congress, Cankarjeva 1/IV, SI-1000 Ljubljana). See OA 10630.
- (14510) KITZ, M. & C. WERTH, 2002. Libellen in der Bruchbach-Otterbachniederung. *Pollichia-Kurier* 18(3): 27-29. — (First Author: Raiffeisenstr. 39, D-76872 Minfeld). A concise outline of the odon. fauna (45 spp.) of the Bruchbach-Otterbach Lowland and the Bienwald (S Palatinate, W Germany), with emphasis on regionally interesting spp., such as e.g. *Coenagrion ornatum*, which is not known from anywhere else in the federal state of Rhineland-Palatinate.
- (14511) KOPAC, J. [Minister of Environment, Republic of Slovenia], 2002. Pravilnik o uvrstitvi ogroženih rastlinskih in živalskih vrst v rdeči seznam. — [Regulations concerning the ranging of threatened plant and animal species on the Red List]. *Uradni List Republike Slovenije / Official Gazette of the Republic of Slovenia* 12(92): 8893-8975.
- The document was published on 24-IX-2002, and is in force from the 15th day after its publication. The odon. Red List appears on pp. 8952-8953 and includes 40 spp., placed into various categories.
- (14512) KULKARNI, P.P. & M. PRASAD, 2002. [Fauna of Ujani] Insecta: Odonata. *Wetland Ecosyst. Ser. zool. Surv. India* 3: 91-104. — (First Author: Western Reg. Stn, Zool. Surv. India, Sector 29, Ravet Rd, Akurdi, Pune-411044, Maharashtra, India). 42 spp. are listed from the man-made Ujani wetland, created by damming the Bhima R. in Pune distr., Maharashtra, India. Precise locality data and brief habitat descriptions are provided.
- (14513) KURY, D. & K. BAUER-STINGELIN, 2002. Änderungen der Libellengemeinschaft in der Zurlindengrube Pratteln zwischen 1986 und 1996. *Mitt. naturf. Ges. beider Basel* 6: 15-22. (With Engl. s.). — (Second Author: Fraumattstr. 51, CH-4410 Liestal). A comparison is made between the 1986 and 1996 odon. assemblages of the abandoned gravel pit, Zurlindengrube Pratteln, alt. 270 m, canton Basel-Landschaft, Switzerland. The alterations are probably due to management measures, aiming at the re-institution of some early succession stage habitats.
- (14514) [LEE, S.-M.], 2002. *World dragonfly special exhibition: Seung-Mo Lee's collection of dragonflies*. National Science Museum, Daejeon/Korea. 6 pp. (fold. brochure). (Korean, with Engl. title). — (c/o S.-M. Lee, Dragonflies & Environment Care Group, 612-12 Gileum 1-dong, Seogbug-Gu, Seoul 136-111, Korea). A guide to the Exhibit (NSM, Daejeon, 12 May-16 June 2002), with col. phot. of the representatives of the main E Asian odon. families.
- (14515) LIBELLULA. Zeitschrift der Gesellschaft deutschsprachiger Odonatologen (GdO) (ISSN 0723-6514), Vol. 21, No. 1/2 (Aug. 2002). (With Engl. s's). — (c/o Ms I. Schrimpf, Heimbühlstr. 32, D-72768 Reutlingen). *Ha, L.Y., H. Wildermuth & S. Dorn*: Emergenz von *Cordulia aenea* (Odonata: Corduliidae) (pp. 1-14); — *Buczyński, P., A. Zawal & E. Filipiuk*: Neue Nachweise von *Orthetrum albistylum* in Nordpolen: erweitert sich sein Verbreitungsgebiet in Mitteleuropa? (Odonata: Libellulidae) (pp. 15-24); — *Thomas, B.*: Temperaturrekorde in den 1990er Jahren und früher Beginn von Flugzeit und Fortpflanzung bei häufigen Libellenarten in Nordwestdeutschland (Odonata) (pp. 25-35); —

- Petzold, F.*: Erster Nachweis von *Leucorrhinia albifrons* in Thüringen (Odonata: Libellulidae) (pp. 37-39); – *Gomphus vulgatissimus* wieder in der thüringischen Saale (Odonata: Gomphidae) (pp. 41-43); – *Böhm, K.*: Erstfund und zugleich erster Entwicklungsnachweis von *Sympetrum meridionale* in Nordrhein-Westfalen (Odonata: Libellulidae) (pp. 45-47); – *Kunz, B.*: *Coenagrion ornatum* an einem ausgebauten Wiesen-graben in Baden-Württemberg (Odonata: Coenagrionidae) (pp. 49-55); – *Kuhn, J.*: *Sympetrum meridionale* am Schmiechener See, Schwäbische Alb: Entwicklungsnachweis und Habitate (Odonata: Libellulidae) (pp. 57-63); – *Wildermuth, H.*: Kadaver von *Somatochlora flavomaculata* als Rendezvous-Platz für Skorpionsfliegen (Mecoptera: Panorpoidea; Odonata: Corduliidae) (pp. 65-69); – *Jödicke, R.*: Nachruf auf Joachim Werzinger (1.Okt.1944-12.Dez.2001) (pp. 71-76); – *Erratum* (pp. 77-78).
- (14516) LOTZING, K., 2002. Die aktuelle Libellen-Fauna (Odonata) der Bergbaufolgewässer im Bereich der Egelner Mulde innerhalb der Bodenniederung des Landkreises Aschersleben-Stassfurt (Sachsen-Anhalt). *Ent. Nachr. Ber.* 46(2): 85-89. (With Engl. s.). – (Am Hollschen Bruch 4c, D-339435 Unseburg). 31 spp. are listed from 15 ponds in the area of an abandoned open-cast mine in the Boden R. Lowlands, Sachsen-Anhalt, E Germany. As noteworthy is emphasized the occurrence of *Calopteryx splendens*, *Lestes barbarus*, *L. dryas*, *L. virens*, *Erythromma viridulum*, *Aeshna affinis*, *A. isosceles*, *Anax parthenope*, *Libellula fulva* and *Sympetrum pedemontanum*.
- (14517) MALANGPO. Newsletter of the Thai National Office of SIO, Bangkok (ISSN 1381-5245), No. 19 (Nov. 2002). – (Orders to the Eds of *Odonatologica*, P.O. Box 256, NL-3720 AG Bilthoven). *Pinratana, A.*: Editorial (p. 175); – *Hämäläinen, M.*: The species list of Thai dragonflies increases steadily: an update (pp. 176-179); – *Hoess, R.*: Odonata found in Chiang Mai, northwestern Thailand, in May 2002 (pp. 180-185); – *Che Salmah, M.R., A. Abu Hassan & M. Azmi*: Safe pre-emergence herbicides for dragonflies (Libellulidae) in rice fields (pp. 186-190); – *Chanpaisaeng, J. & S. Khunwiset*: A survey of Odonata adults at Ao Luk, Krabi province, Thailand (p. 191); – *Khunwiset, S. & J. Chapaisaeng*: A survey of Odonata adults and larvae in Thung Pha Phum district, Kanchanaburi province, Thailand (pp. 192-194).
- (14518) MONNERAT, C., 2002. Déplacements chez le genre *Sympetrum* à l'automne 1999 en Suisse occidentale (Odonata, Libellulidae). *Bull. romand Ent.* 20(1): 13-27. (With Engl. s.). – (CSCF, Terreaux 14, CH-2000 Neuchâtel). Due to the favourable weather conditions and the prevailing N-NE winds during late Aug. and in Sept. 1999, *S. depressiusculum*, *S. flaveolum*, *S. meridionale* and *S. pedemontanum* were observed in the regions where they are not known to be indigenous. Wind-protected sites, such as pond embankments and forest edges, were used as temporary dwellings. Migrations during the second half of the flying period occasionally lead to colonization of suitable habitats. The evidence is presented from 4 cantons in W Switzerland.
- (14519) MOORE, N.W., 2002. *Oaks, dragonflies and people*. Harley Books, Colchester. 148 pp., 36 col. pls excl. Paperback (24.4x17.2 cm). ISBN 0-946589-71-2. Price: UK £ 15.95 net. – (Publishers: Martins, Great Horkesley, Colchester, Essex, CO6 4AH, UK). This is a dragonfly book, unique in its approach, objectives and style. It is a very personal account of the Author's experiences in the field of conservation. It is divided into 2 distinct but related parts. In the first, he describes how some 40 yr ago he acquired a bare field adjacent to his home in Cambridgeshire, England and transformed a part of it into a private nature reserve with a wood, large dragonfly pond and rough grassland. He details his successes in trying to attract dragonflies and other wildlife, which have subsequently colonized it, as well as his failures. In his words: 'many people wish to encourage wildlife on their land but do not know exactly what to do or what they can expect to achieve'. In the second part, he relates his own local experience to the wider conservation scene. The Author's aims are to encourage farmers and owners of large gardens to create nature reserves by describing the pleasures which flow from such a project. To the professional odonatologists, his record of the succession in odon. colonization etc. will be indispensable. The book should not be lacking in any odonatol. library.
- (14520) NAKAIKEMI WETLAND TRUST [Chief Ed. S. Wada], 2002. *The field guide for dragonflies and damselflies in Nakaikei Marsh, Fukui prefecture, Japan*. Nakanishi Printing [for Org. Committee 13th Dragonfly Citizen Summit], Tsuruga. iv+173 pp. Softcover (18.0x25.4 cm). ISBN none. Price: ¥ 2500.- net. (Jap., with Engl. title & Preface; taxonomic nomenclature). – (For copies apply to: Ms M. Tashiro,

- 13-29, Shirogane-cho, Tsuruga, Fukui, 914-0054, JA; — Chief Ed.: 5F, Dai-1 Okazaki Bldg, 3-4-5 Uchikanada, Chiyoda-ku, Tokyo, 101-1147, JA). This is a splendid book (more than a mere identification guide!), published on the occasion of the 13th Dragonfly Citizen Summit. Nakaikemi Marsh in Kashimagari (Tsuruga city) has a surface of ca 25 ha and it is completely surrounded by foothills. It supports at least 69 odon. spp. (35% of the odon. fauna of Japan) and represents therewith one of the 3 richest odon. localities in Japan. The exceptional biodiversity is due to the availability of a large spectrum of stagnant and running water habitats, while the forests of the surrounding foothills obviously also play an important role in supporting odon. life. Recent serious anthropogenic disturbances are particularly apparent in the introduction of the notorious exotic weed, *Solidago altissima*, and an American craw fish. — Each sp. is treated on a separate page, excellent field portraits are included, 12 col. pls, showing phot. of the specimens, with the indications of features important for identification, are appended. Also provided is a col. map of the wetland.
- (14521) NIKULA, B., J. SONES, D. STOKES & L. STOKES, 2002. *Beginner's guide to dragonflies*. Little, Brown & Co., Boston-New York-London. 161 pp. Softcover (17.8x11.4 cm), ISBN 0-316-81679-5. — Price: US \$ 8.95 net. An easy-to-use identification guide, covering over 100 N American Zygoptera and Anisoptera spp. For each sp. are provided a concise description, notes on behaviour, information on habitat and flight season, a col. portrait, and a col. range map.
- (14522) [NOGUCHI, H.], 2002 [The first record of *Sympetrum vulgatum imitans* in Japan]. *Yomiuri Shimbun*, issue of 8 Nov., p. 36. (Jap.). — (c/o R. Futahashi, Room No. 301, Diaroku Pearl Maison Ebihara, 6-1-35 Nishihara, Kashiwa, Chiba, 277-0885, JA). 4 ♂ were collected in a marsh in Fushiki, Takaoka, Toyama pref., on 4/6-X-2002. This brings the status of the odon. fauna of Japan up to 215 spp. and sspp. It is interesting that K. Inoue suggested the probability that this taxon will be discovered in Japan already in 1982 (*Gracile* 30: 1-9) and again in 1996 (*Nature & Insects* 31/8: 9-12).
- (14523) ODONATOLOGICAL LIBRARY NEWS, Osaka, Nos 27 (18 Nov. 2000), 28 (20 March 2001), 29 (2 Dec. 2001), 30 (3 March 2002). Published by Kansai Research Group of Odonatology. ISSN none. (Jap., with Engl. title). — (c/o K. Inoue, 5-9 Fuminosato 4-chome, Abeno-ku, Osaka, 545-0004, JA). The 4 issues (54 pp.) contain 1012 numbered bibliographic entries (Nos 7209-8220) of Japanese publications (1960-2001, but mostly 2000-2001)
- (14524) OERTLI, B., D. AUDERSET JOYE, E. CASTELLA, R. JUGE, D. CAMBIN & J.-B. LACHAVANNE, 2002. Does size matter? The relationship between pond area and biodiversity. *Biol. Conser.* 104: 59-70. — (Lab. Ecol. & Biol. Aquat., Univ. Geneva, 18 ch. des Clochettes, CH-1206 Geneva). The biogeographical principle that larger areas support more spp. was tested by the examination of the relationship between size and species diversity in 80 ponds, scattered throughout Switzerland. Gastropoda, Bivalvia (Sphaeriidae), adult and larval Coleoptera, adult Odon., and Amphibia were considered. Pond size was found to be important only for Odon. (44 spp., but not named); it explained 31% of the variability in the odon. species richness.
- (14525) OGÓLNOPOLSKA KONFERENCJA NAUKOWA "OCHRONA OWADÓW W POLSCE [...]": *Streszczenia referatów [...]. ALL-POLAND SCIENTIFIC CONFERENCE "INSECT CONSERVATION IN POLAND [...]. Abstracts of papers [...].* 2002. Pol. Tow. Ent., Poznań & Univ. Warmińsko-Mazurski, Olsztyn. 64 pp. (Pol.). — (Available from Pol. Ent. Soc., Ul Dąbrowskiego 159, PO-60-594 Poznań). [Odonatol. papers:] Bernard, R., P. Buczyński & G. Tończyk: Status, threats to, and conservation of the odonate fauna of Poland (pp. 8-9); — Biesiadka, E.: Ecological problems in conservation of aquatic insects (pp. 9-11); — Baranowska, A. & A. Zawal: Odonate fauna of Binowskie Lake (p. 29); — Buczyński, P., S. Czachorowski, E. Serafin & W. Szczepański: Is a nature reserve the optimal place for conservation of aquatic insects?: an example of dragonflies and caddisflies (Odonata, Trichoptera) in the "Kośno Lake" Nature Reserve (pp. 30-31); — Buczyński, P. & K. Lewandowski: Is a period of 200 years sufficient for dragonfly exploration of a region: exemplified on dragonflies of the Northpolish lake district (pp. 31-32); — Dolny, A., A. Miszt & J. Parusel: Dragonfly conservation perspectives in the Czech and Polish parts of the Upper Silesia (pp. 33-34); — Kozak, A. & A. Zawal: Com-

parison of dragonfly communities in the open-land and forest small water bodies (p. 42).

- (14526) *The OHIO DRAGON-FLIER*. Newsletter of the Ohio Odonata Society, Vol. 12, No. 3 (Sept. 2002). — (c/o B. Glotzhoher, Ohio Hist. Soc., 1982 Velma Ave, Columbus, OH 43211-2497, USA).
[Selected titles:] *Glotzhoher, B.*: Duckweed Firetail found in WC (p. 2; the northernmost record of *Telebasis* byersi); — *Pogacnik, J.*: Swarms of Swamp Darners (p. 5; *Epiaschna heros*); — *Barber, B., B. Dubois & L. Jacobs*: Migrant dragonflies (p. 6); — *Dwayne, S.*: Predator or prey? (p. 7; *Hagenius brevistylus* chasing a spotted sandpiper); — *Glotzhoher, B.*: New state listed Odonata (p. 7); — Big prey for odes (p. 8; *Hagenius brevistylus* and *Tachopteryx thoreyi* preying on papilionids).
- (14527) OLSVIK, H., 2002. Fredete øyestikkere i Norge. — [Protected dragonflies in Norway]. *Insekt-Nytt* 27(1/2): 8-10 (Norwegian). — (N-6694 Foldfjorden).
Leucorrhinia caudalis, *L. albifrons* and *L. pectoralis*; their habitats, distribution and adult phenology are stated.
- (14528) PICKER, M., C. GRIFFITHS & A. WEAVING, 2002. *Field guide to insects of South Africa*. Struik Publishers, Cape Town. 440 pp. Paperback (14.5x20.5 cm). ISBN 1-86872-713-0. — (Publishers: Cornelis Struik House, 80 McKenzie St., Cape Town-8001, SA).
A comprehensive field guide, with descriptions of ca 1200 common or otherwise interesting spp. (Odon. pp. 30-43). Each account covers identification, biology, distribution and related spp., and is accompanied by a col. phot. of the respective sp. or family. No photographs were ever published of some of the odon. spp. presented here.
- (14529) PILGRIM, E.M., S.A. ROUSH & D.E. KRANE, 2002. Combining DNA sequences and morphology in systematics: testing the validity of the dragonfly species *Cordulegaster bilineata*. *Heredity* 89: 184-190. — (First Author: Dept Biol., Utah St. Univ., Logan, UT 84322, USA).
Morphological techniques are combined with DNA sequences to determine the status of *C. bilineata*. The latter and *C. diastatops* are very similar in morphological features, therefore the status of *C. bilineata* as a valid sp. is in question. Here, ♂ morphological measurements and internal transcribed spacer 1 (ITS-1) sequences of rDNA are compared between the 2 taxa. The ♂ hamule measurements (where copulation occurs) show little difference between the taxa in question, but the anal appendage measurements (where the ♂ first contacts the ♀) show marked divergence between the 2 taxa. Cluster analysis with these anal appendage measurements correctly assigns almost all individuals measured into their respective taxon. PCR amplification products of ITS-1 display a ~50 bp size difference between *C. bilineata* (n = 4) and *C. diastatops* (n = 5) regardless of collection site. Sequence data or these amplifications show 51 bp missing in one locus in the ITS-1 of *C. bilineata* relative to *C. diastatops*. A lone population of *C. diastatops* from Wisconsin has three individuals with ITS-1 products that match the size of both *C. bilineata* and *C. diastatops*. One individual from this population appears to yield two ITS-1 amplification products that match both *C. bilineata* and *C. diastatops*. Although this population may be evidence for hybridization between the 2 taxa, such hybridization is not necessarily sufficient to disqualify the validity of a separate sp. designation for *C. bilineata*. Morphology and ITS-1 sequences depict a high degree of divergence that is consistent with species-level differences.
- (14530) PRASAD, M. & P.P. KULKARNI, 2002. [Fauna of Eravikulam National Park] Insecta: Odonata. *Conserv. Area Ser. zool. Surv. India* 13: 7-9. — (Zool. Surv. India, M-Block, New Alipore, Calcutta-700 053, India).
An annotated list of 7 spp.; — Kerala, India.
- (14531) *PROGRAM AND ABSTRACTS OF THE FIRST SYMPOSIUM OF THE SIOROEA (S.I.O. Regional Office in East Asia)*. 26-29 July 2002. Natn. Sci. Mus., Daejeon, Korea. 42 pp. Edited by Dr S.-M. Lee. Price: € 25.- net. — (Orders to the Eds of *Odonatologica*, P.O. Box 256, NL-3720 AG Bilthoven).
Lee, S.-M.: Preface (p. 1); — *Symposium Officers* (p. 2); — *General information* (pp. 3-4); — *Program* (pp. 5-9); — *Haritonov, A.*: Dragonfly fauna of the Asian part of the former USSR (pp. 10-11); — *Kosterin, O.E.*: Western borders and isolates of some generally East Asian odonate species in South Siberia and their putative origin (pp. 12-13); — *Malikova, E.I.*: The modern state of knowledge of Odonata of Russian Far Eastern natural reserves (p. 14); — *Karube, H.*: On the chlorogomphine dragonflies of Vietnam (p. 15); — *Kojo, T.*: On the nocturnal roosting of *Orthetrum albistylum speciosum* and *Sympetrum infuscatum* (Aniso-

- ptera: Libellulidae) (p. 16); — *Taguchi, M., H. Tani, M. Taguchi & K. Nishimura*: The use of secondary deciduous forest with the water area in Odonata, 1: community structure in relation to the environment (pp. 17-18); — 2: spatial distribution of two damselflies, *Lestes temporalis* and *Copera annulata*, in relation to the reproductive behavior (pp. 19-20); — *Ohama, S.*: Notes on the immigrant *Sympetrum depressiusculum* and *S. cordulegaster* found in Shimane prefecture along the Japan Sea (p. 21); — *Wilson, K.D.P. & G.T. Reels*: Dragonflies from Nan Ling, North Guangdong, China (p. 22); — *Popova, O.N.*: The Asiatic dragonflies of the genus *Sympetrum* (pp. 23-24); — *Dumont, H. & P. Weeks*: Position of the eastern representatives of *Cercion* redefined by molecular and morphological means (p. 25); — *Watanabe, M. & Y. Mimura*: Population dynamics of the endangered brackish water damselfly, *Mortonagrion Hirosei*, in a small reed community (pp. 26-27); — *Inoue, K. & M. Okazaki*: Upright type emergence of *Macrodiplax cora* (Anisoptera: Libellulidae) (p. 28); — *Inoue, K., E. Malikova & N. Katatani*: On the status of the intermediate forms between *Sympetrum depressiusculum* and *S. frequens* collected in Primoriya and Korea (p. 29); — *Lee, S.-M.*: A list of dragonflies of Korean peninsula (pp. 30-34); — *Addresses of participants* (pp. 35-42).
- (14532) [QUINTART, A.], 2002. La Loi sur la conservation de la nature (M.B. du 11/09/1973) en Wallonie après sa dernière modification par le Décret wallon du 06 décembre 2001 appelé Décret relatif à la conservation des sites Nature 2000 ainsi que de la faune et flore sauvages (extraits). *Naturalistes belg.* 83(1/2): 1-40.
To the 3 odon. spp. "strictly protected" by the Berne Convention, 21 spp. are now added in the Annexe IIb of the modified Directive of 6 Dec. 2001 that likewise enjoy "strict protection" within the territory of Wallonia, Belgium.
- (14533) RABENI, C.F., K.E. DOISY & D.L. GALAT, 2002. Testing the biological basis of a stream habitat classification using benthic invertebrates. *Ecol. Appl.* 12(3): 782-796. — (Missouri Coop. Fish & Wildlife Res. Unit, U.S. Geol. Surv., 302 Anheuser-Busch Nat. Resour. Bldg, Univ. Missouri, Columbia, MO 65211-7240, USA).
The biological basis of a physical channel unit classification system for a warmwater stream (Jacks Fork R., Missouri, USA) was evaluated. 7 coenagrionid, gomphid and libellulid genera are among the taxa considered.
- (14534) ROWE, R.J., 2002. Agonistic behaviour in final-instar larvae of *Agriocnemis pygmaea* (Odonata: Coenagrionidae). *Aust. J. Zool.* 50(2): 215-224. — (Sch. Trop. Biol., James Cook Univ., Townsville, Qld 4811, AU).
25 major displays were distinguished. The behavioural repertoire is broadly consistent with published information on other coenagrionid larvae. The 'abdomen lift' behaviour, largely restricted to smaller instars of other examined spp., occurs with some frequency in final-instar *A. pygmaea*. The use of larval agonistic display characters in phylogenetic analysis is discussed.
- (14535) RUMPF, M. & P. WERNICKE, 2002. Die Libellenfauna ausgewählter Gewässer im Naturpark Feldberger Seenlandschaft. *Natur NatSchutz Mecklenburg-Vorpommern* 36: 92-109. (With Engl. s.). — (First Author: Blumenstr. 13, D-17268 Warthe).
The Park is situated between Woldegk, Neustrelitz and the Brandenburg border, E Germany, and has a surface of ca 34500 ha, ca 10% of which is occupied by 69 lakes (> 1 ha). Its odon. fauna was surveyed during 1998-1999; 55 spp. were so far recorded, their local occurrence and ecology are described.
- (14536) SAJU, M.T., 2002 [Book review]. On the banks of the Mayyazhi, by M. Kukundan. *New Indian Express*, issue of 11 Aug., p. 16.
This is a novel from the post-colonial life in Mayyazhi (now called Mahé), on the Malabar Coast, N of Kerala, politically part of the Union Territory of Pondicherry, SW India. "The folklore of Mayyazhi has it that human souls hover as dragonflies over the Velliyan Rock in the sea". The reviewer says that this belief "has been wonderfully reworked [in the book], especially at the end of the novel". — (The publisher of the book is not stated).
- (14537) [SAMWAYS, M.J.] (Anonymous), 2002. Congratulations to our network. *Species* 37: 10. — (c/o M.J. Samways, Invert. Cons. Res. Cent., Sch. Bot. & Zool., Univ. Natal, Private Bag X01, Scottsville-3209, Pietermaritzburg, SA).
The well-known S African odonatologist, Prof. Dr M.J. Samways, Chair of IUCN/SSC Southern African Invertebrate Specialist Group and Director of S Africa's Invert. Conser. Res. Cent., has been awarded the National Research Foundation's (S Afr.) highest accolade, the 'A-rating'.
- (14538) SCHLEEF, J., 2002. Zur Libellenfauna der

- Rieselfelder Windel in Bielefeld-Senne. *Ber. naturw. Ver. Bielefeld* 42: 355-364. — (Biol. Stn Gütersloh/Bielefeld, Niederheide 63, D-33659 Bielefeld).
An annotated review of 27 spp., recorded during 1998-2001. *Brachytron pratense*, *Orthetrum coerulescens* and *Sympetrum fonscolombii* were previously not known from the Bielefeld area, North Rhine-Westphalia, W Germany.
- (14539) SKOBERNE, P., 2002. Rastlinska past za kačjega pastirja. — [Plant trap for a dragonfly]. *Gea, Ljubljana* 12(5): 65. (Slovene). — (Agencija Rep. Slovenije za okolje, Vojkova 1/A, SI-1000 Ljubljana).
A botanist's encounter with a *Pyrrhosoma nymphula*, trapped by *Drosera anglica*; Zejna Valley nr Hotedršica, Slovenia.
- (14540) STANGE, G., S. STOWE, J.S. CHAHL & A. MASSARO, 2002. Anisotropic imaging in the dragonfly median ocellus: a matched filter for horizon detection. *J. comp. Physiol. (A)* 188(6): 455-467. — (Cent. Visual Sci., Res. Sch. Biol. Sci., Australian Natn. Univ., P.O. Box 475, Canberra, ACT 0200, AU).
It is suggested that the dragonfly median ocellus is specifically adapted to detect horizontally extended features rather than merely changes in overall intensity. Evidence is presented from the optics, tapetal reflexions and retinal ultrastructure. The underfocused ocelli of adult insects are generally incapable of resolving images. However, in the dragonfly median ocellus the geometry of the lens indicates that some image detail is present at the retina in the vertical dimension. Details in the horizontal dimension are blurred by the strongly astigmatic lens. In the excised eye the image of a point source forms a horizontal streak at the level of the retina. Tapetal reflections from the intact eye show that the field of view is not circular as in most other insects but elliptical with the major axis horizontal, and that resolution in the vertical direction is better than in the horizontal. Measurements of tapetal reflections in locust ocelli confirm their visual fields are wide and circular and their optics strongly underfocused. The ultrastructure suggests adaptation for resolution, sensitivity and a high metabolic rate, with long, widely separated rhabdoms, retinulae cupped by reflecting pigment, abundant tracheoles and mitochondria, and convoluted, amplified retinula cell plasma membranes.
- (14541) STUNTZ, S., C. ZIEGLER, U. SIMON & G. ZOTZ, 2002. Diversity and structure of the arthropod fauna within three canopy epiphyte species in central Panama. *J. trop. Ecol.* 18(2): 161-176. — (Last Author: Bot. Inst., Univ. Basel, Schönbeinstr. 6, CH-4056 Basel).
The arthropod fauna inhabiting 90 individuals of *Tillandsia fasciculata*, *Vriesea sanguinolenta* and *Dimerandra emarginata* in the moist lowland forest of the Barro Colorado National Monument was investigated. 1 (unnamed) odon. sp. was encountered solely in *Tillandsia*.
- (14542) SZÁLLASSY, N., E. BÁRDOSI, S.D. ZOLTÁN, S. TIBOR & G. DÉVAI, 2002. Fluktuáló aszimmetria, túlélés és párzási siker az *Orthetrum coerulescens* (Odonata: Libellulidae) hímeknél. — Fluctuating asymmetry, survival and mating success in males of dragonfly *Orthetrum coerulescens* (Odonata: Libellulidae). *Hidrol. Közl.* 82: 125-127. (Hung., with Engl. s.). — (First Author: Dept Ecol. & Hydrobiol., Univ. Debrecen, P.O. Box 71, HU-4010 Debrecen).
The studies were conducted in a closed population along a slow flowing creek in June. Survival rate of unpaired ♂ differed significantly from that of paired ones on the first 2 days after marking; in both paired and unpaired ♂♂ it became constant later. Recapture rate differed in the 2 groups and changed in time. Neither the forewings nor the hindwings differed significantly in their fluctuating asymmetry values between the paired and the unpaired ♂♂.
- (14543) TAN, J.-J. & D. REN, 2002. Palaeoecology of insect community from Middle Jurassic Jiulongshan formation in Ningcheng county, Inner Mongolia, China. *Acta zootaxon. sin.* 27(3): 428-434. (Chin., with Engl. s.). — (Dept Biol., Capital Normal Univ., Beijing-100037, PRC).
Samarura gigantea, *S. puncticaudata*, *Huabeia liugouensis*, and *Paraliassophlebia changdeensis* are listed from the aquatic community of that locality.
- (14544) TENNESSEN, K.J., 2002. Odonata. In: D.W. Webb, [Ed.], *Current and selected bibliographies on benthic biology*, 2001, pp. 26-31, N. Am. Benthol. Soc., Champaign/IL. — (1949 Hickory Ave, Florence, AL 35630, USA).
244 titles.
- (14545) TERZANI, F., 2002. Ricerche odonatologiche in Toscana. 8. La *Lindenia tetraphylla* (van der Linden, 1825) (Insecta, Odonata, Gomphidae). *Quad. Studi Stor. nat. Romagna* 16(Suppl.): 5-6. (With Engl. s.). — (via

L. Cigoli 12, I-50142 Firenze).

Several specimens, taken in 1995 and 1996 at a locality between Torre del Lago Puccini and Viareggio (LU), are brought on record. The last previous record of *L. tetraphylla* in Tuscany, Italy is from 1938.

- (14546) *TEZISY DOKLADOV*. 12 S'ezd Russkogo entomologicheskogo Obshchestva. — [ABSTRACTS OF PAPERS of the 12th Congress of the Russian Entomological Society], Sankt-Peterburg, 19-24 Aug. 2002. Zool. Inst., Russ. Acad. Sci., Sankt Peterburg. 394 pp. ISBN none. (Russ., titles of papers also in Engl.). — (Publishers: Universitetskaya nab.1, RUS-199034 Sankt-Peterburg).

[Odon. papers; authors' postal addresses not stated:] *Bragina, T.M.*: Fauna of dragonflies (Odonata) of Naurzum National Reserve (N Kazakhstan) (p. 49); — *Matushkina, N.A.*: Redevelopment of females genital segments of *Anax imperator* (Odonata, Aeshnidae) during the metamorphosis [sic!] (pp. 231-232); — *Perepelov, E.A.*: Karyosystematics and phylogeny of dragonflies (Odonata) of northern Asia and neighbouring regions (p. 278); — *Slivko, A.A.*: Seasonal activity of dragonflies (Odonata) in the "Ilmenno-Bugrovoy" Nature Reserve (p. 324); — *Stain, V.J.*: Zoogeographic subdivisions of the North Caucasus using the data on distribution of Odonata (p. 330); — To the phenology of dragonflies (Odonata) of plain of the Central Caucasus (pp. 330-331).

- (14547) *TOMBO, ACTA ODONATOLOGICA JAPONICA* (ISSN 0495-8314), Vol. 44, No. 1/4 (31 Aug. 2002) (Jap., with Engl. titles & s's). — (c/o Dr S. Eda, 3-4-25 Sawamura, Matsumoto, Nagano, 390-0877, JA).

Yamamoto, T.: Oviposition of *Planaeschna ishigakiana* Asahina (cover ph.). — *Karube, H.*: Notes on the Chinese *Planaeschna* (Odonata: Aeshnidae) deposited in the Natural History Museum, London, with description of a new species from southern China (pp. 1-5; *P. gressitti* sp. n.); — A new record of *Philosina alba* Wilson from Laos (pp. 5-6); — New records of *Archineura hetaerionoides* (Fraser) (Calopterygidae) from northern Vietnam, with collecting data from Laos (pp. 6-7); — A new record of *Boninthemis insularis* (Matsumura) from Kitaiwo-Jima island (pp. 7-8); — *Yokoi, N. & T. Mitamura*: Description of a new *Macromia* species from central Laos (Odonata: Corduliidae) (pp. 9-11; *M. vangviengensis* sp. n.); — *Eda, S.*: Unusually early occurrence of *Aeshna mixta* soneharai Asahina (p. 11); — *Kita, H. & A. Makino*: First record

of *Anaciaeschna martini* (Selys, 1897) in Miyagi pref. (p. 12); — *Matsuda, S., M. Hiasa, K. Sugihara & M. Miyashita*: Discovery of *Mortonagrion Hirosei* from the mainland of Kyushu (Coenagrionidae) (pp. 13-18); — *Eda, S.*: Annual meeting of the Japanese Society for Odonatology in 2001 (p. 18); — *Kano, K. & F. Kobayashi*: Some behaviors of *Rhipidolestes asatoi* Asahina (pp. 19-20); — *Kano, K.*: Microhymenopteran insects on adult females of *Gynacantha ryukyuensis* (pp. 23-24); — *Kita, H.*: Notes on the situation of the dying aged female of *Epiophlebia superstes* (Selys) in ovipositing in the field (pp. 23-24); — *Futahashi, R., H. Futahashi & Y. Araki*: The odonate fauna of Noto peninsula, Hokuriku district, Honshu (pp. 25-28); — *Taketo, A.*: Notes on recent informations of odonate fauna in Ishikawa and Fukui prefectures, Honshu (pp. 29-30); — *Eda, S.*: Book review Dragonflies of the world, by J.D. Silsby (p. 30); — *Nishu, S.*: Discovery of an exceptional habitat of *Libellula angelina* Selys (pp. 31-32); — *Futahashi, R. & H. Futahashi*: A case of female adult of *Anax n. nigrofasciatus* (Aeshnidae) bitten by a last instar larva of the same species (p. 33); — *Yokoyama, T.*: Discovery of *Aeshna mixta* soneharai Asahina in Tokachi subprefecture, Hokkaido (p. 34); — *Eda, S.*: Letter from Chief Editor (p. 34).

- (14548) *VAN SWAAY, C., R. KETELAAR & D. GROENENDIJK*, 2002. *Dagvlinders en libellen onder de meelst: jaarverslag 2001*. — *Monitoring butterflies and dragonflies in the Netherlands in 2001*. Vlinderstichting & CBS, Wageningen. 29 pp. Rapport VS2002.010. (Dutch, with Engl. s.). — (De Vlinderstichting, P.O. Box 506, NL-6700 AM Wageningen). During May-Sept. the odon. counts were made at 316 sites, in 2-week intervals. The numbers of individuals were higher than in the previous yrs. For the 4th consecutive yr, *Enallagma cyathigerum* was the most common sp. (close to 90.000 individuals). The most species-rich sites were located on sandy soils in the eastern Netherlands.

- (14549) *VOSHELL, J.R., Jr*, 2002. *A guide to common freshwater invertebrates of North America*. McDonald & Woodward, Blacksburg/VA. xvi+442 pp., 100 col. pls incl. Paperback (14.0x19.5 cm). ISBN 0-939923-87-4. Price: US \$ 29.95 net.

Directed at naturalists, environmentalists, anglers, teachers, students etc., the book is providing substantive information on biology of aquatic macroinvertebrates, but it is not an identification guide. The odon. are dealt with on pp. 121-127 (col. pls 34-40) and 288-305 (larval

biology and the common families).

- (14550) WEBB, D.W., [Ed.], 2002. *Current and selected bibliographies on benthic biology, 2001*. N. Am. Benthol. Soc., Champaign/IL. iv+116 pp. — (Orders to: L.B. Johnson, Natural Resour. Res. Inst., Univ. Minnesota, 5013 Miller Trunk Hwy, Duluth/MN 55811, USA).

The serial is published annually, and summarizes titles of papers published during the previous yr. Pertinent titles prior to that yr are also included if they have not been cited in the previous reviews. — For Odon. see OA 14544.

- (14551) WILDERMUTH, H., 2002. Artenschutz im Spannungsfeld zwischen Forschung und Umsetzung: Beispiel Libellen (Odonata). *Artenschutzreport 2002*(12): 1-6. (With Engl. s.). — (Haltbergstrasse 43, CH-8630 Rüti). Conservation of animal spp. requires interaction between applied research and realisation of projects. This is exemplified by the odon., represented in central Europe by ca 80 spp. Research related to dragonfly conservation comprises quantified ecofaunistic surveys with evidence of autochthony, ecological analyses of limiting niche factors, mainly of larvae, ecophysiological studies of habitat recognition by adults and investigations of habitat use as well as population biology and dispersal. Thereby, research concentrates on threatened species. The realisation of conservation projects is based on the results of research aimed at single spp. or species communities. Preservation of primary biotopes, especially of rare larval habitats, must obtain priority. Secondary biotopes such as water bodies in partly drained moorland, gravel excavations or man-made ponds may also be of some importance for numerous spp. However, most of them need continuous management or regeneration. The rotary management of small ponds enables the establishment of a mosaic of all succession stages, which changes in space and time on a confined area, thus providing permanent habitats for a high diversity of aquatic organisms. Success in species preservation ultimately depends less on research than more on the good will of all the people concerned and on the high qualities of the conservancy actors.

ponds. *Envir. Toxicol. Chem.* 21(1): 143-150. — (First Author: Ponds Conserv. Trust, Oxford Brookes Univ., Gipsy Lane, Headington, Oxford, OX3 0BP, UK).

The extent to which aquatic plants and macroinvertebrate assemblages in small outdoor microcosms (cylinders 1.25 m diameter × 1.25 m deep) resemble those in natural ponds in Britain was investigated. Multivariate analysis indicated that plant and animal assemblages were most like those of deep, circumneutral ponds. Microcosms supported similar numbers of odon. spp. as natural ponds, but significantly fewer Coleoptera, Hemiptera and Trichoptera, which is ascribed to the absence of a shallow littoral area in the microcosms. The incorporation of natural margins would be likely to lead to experimental communities that were closer analogues of natural ponds.

- (14553) WILLIAMSONIA. Newsletter of the Michigan Odonata Survey. (ISSN none). Vol. 6, No. 3/4 (Oct. 2002). — (c/o Dr M.F. O'Brien, Insect Div., Mus. Zool., Univ. Michigan, 1109 Gaddes Ave, Ann Arbor, MI 48109-1079, USA).

Editorial (pp. 1-2); — *O'Brien, M.*: 2002 Great Lakes Odonata Meeting, Higgins Lake, MI (pp. 2-6); — *Lost Nations SGA field trip* (p. 7); — *Craves, J. & D.O'Brien*: Hunting new state ode records or an ode to hunting new state records (pp. 7-9); — *Freeman, C.*: *Dromogomphus spoliatus* caught! (p. 9); — *Shappiro, E.*: Field notes from Pickerel Lake and Crooked Lake, Washtenau county (p. 10); — *New publications* (p. 11); — *2002 Checklist of Odonata species found in Michigan* (pp. 12-13).

- (14554) WILSON, K.D.P., 2002. *Hong Kong flying colour, 3: Dragonflies*. Friends of the Country Parks, Hong Kong. x+101 pp. Softcover (21.0×14.5 cm). ISBN 962-86149-0-8. Price: € 22.- net. — (Available from the Eds of Odonatologica, P.O. Box 256, NL-3720 AG Bilthoven).

A beautiful album of field portraits (col. phot.) of the adults of almost all of the 107 spp. so far known from Hong Kong. A checklist of the Hong Kong odon. spp. is appended. To the visitors of the area, the book could serve as an easy identification guide.

2003

- (14552) WILLIAMS, P., H. WHITFIELD, J. BIGGS, G. FOX, P. NICOLET, N. SHILLABEER, T. SHERRATT, P. HENEGHAM, P. JEPSON & S. MAUND, 2002. How realistic are outdoor microcosms? A comparison of the biota of microcosms and natural

- (14555) ARGIA. The news journal of the Dragonfly Society of the Americas (ISSN 1061-8503), Vol. 14, No. 4 (10 Jan. 2003). — (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).

- [Scientific articles:] *Prather, B. & I. Prather*: First Colorado record of *Celithemis elisa* (p. 3); — *Johnson, A.*: Two new species from Iowa (pp. 4-5); — *Mauffray, B.* Georgia summary (p. 5); — *Hutchings, G.E.*: A list of the Odonata of Athabasca Sand Dunes Provincial Wildness Park, Saskatchewan (pp. 5-8); — *Brown, V.*: Rhode Island Odonata Atlas: 2002 summary (pp. 9-10); — *Donnelly, N.*: Problems with *Tetragoneuria*! (pp. 10-11); — *Sibley, F.*: 60 species in 60 ponds (pp. 11-16; upstate New York); — *Hamos Hernández, J.M.*: Odonata of the Sierra Las Damas, Sancti-Spiritus province, Cuba (pp. 16-18); — *Beckemeyer, R.*: Dragonflies infiltrate Texas Butterfly Festival (pp. 18-19; records); — New Harmony, Indiana: a stop along interstate 64 of historical interest to odonatists (pp. 19-20); — *Paulson, D.*: Where to go on your next dragonfly trip (pp. 20-21; commented map of the US counties with less than 10 odon. spp. recorded); — *Beckemeyer, R.*: Are beetle dogs smarter than dragonfly dogs? A challenge from the past (p. 21; note on dogs knocking down dragonflies); — *Tramea* (pp. 23-24; odon. papers on the web etc.).
- (14556) *ATROPOS*, No. 18 (Feb. 2003) ISSN none. — (c/o M. Tunmore, 36 Tinker Lane, Meltham, Holmfirth, W Yorks, HD9 4EX, UK).
[Odon. articles:] *Nobes, G.*: Southern Emerald damselfly *Lestes barbarus* (Fabr.): the first British record (pp. 3-6); — *Parr, A.*: Migrant dragonflies in 2002, including recent decisions and comments by the Odonata Records Committee (pp. 18-24); — *Taylor, P.*: Dragonfly conservation from the BDS (pp. 35-36). — *R e p o r t s* from coastal stations, 2002: *Tunmore, M.*: Lizard peninsula, Cornwall (pp. 48-49); — *Cade, M.*: Portland, Dorset (pp. 49-51); — *Knill-Jones, S.*: Isle of Wight (p. 51-52); — *Troake, P.*: Rye Harbour SSSI, East Sussex (pp. 54-55); — *Hunter, I.*: Elms Farm, Icklesham, East Sussex (pp. 55-56); — *Glancy, S.*: Dungeness area, Kent (pp. 56-58); — *Dewick, S.*: Bradwell-on-Sea, Essex (pp. 59-61); — *Odin, N.*: Landguard Bird Observatory, Suffolk (pp. 61-62); — *Parfitt, A.*: Minsmere RSPB Nature Reserve, Suffolk (p. 62); — *Bowman, N.*: Ecoles-on-Sea, Norfolk (p. 63); — *Sykes, T.*: Gibraltar Point, Lincolnshire (p. 64); — *Spence, B.*: The Spurn area, East Yorkshire (pp. 64-65); — *Darke, J. & J. Hayden*: Skomer Island NNR, Pembrokeshire (p. 68); — *Scott, D.A.*: Dursey Island, Co. Cork (pp. 68-69).
- (14557) *BULLETIN OF AMERICAN ODONATOLOGY* (ISSN 1061-2781), Vol. 6, No. 4 (10 Jan. 2003). — (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).
Paulson, D.: Comments on the *Erythrodiplax connata* (Burmeister, 1839) group, with the elevation of *E. fusca* (Rambur, 1842), *E. minuscula* (Rambur, 1842), and *E. basifusca* (Calvert, 1895) to full species (Anisoptera: Libellulidae) (pp. 101-110; Borrer's *connata* group is divided into 4 spp.; the remaining spp. of his group are considered valid; *E. portoricensis* Kolbe, is probably a synonym of *justiniana* rather than *connata*, and *E. fraterna* Hag. is considered a *nomen nudum*).
- (14558) *THEISCHINGER, G. & J.H. HAWKING*, 2003. *Dragonflies of Victoria: an identification guide to adult and larval dragonflies (Odonata)*. Coop. Res. Cent. Freshw. Ecol., Albury/NSW. iv+65 pp., 136 col. figs incl. Softcover (14.8x24.0 cm). ISBN 1-876144-49-1. — Price ca AU \$ 40.-. — (Orders to: Murray Darling Freshw. Res. Cent., P.O. Box 921, Albury, NSW 2640, AU).
An identification guide, designed for non-professional and professional entomologists. The dichotomous keys are accompanied by figs of diagnostic characters, to aid the identification of both adults and larvae known to occur in Victoria, Australia (76 spp.). Col. phot. of most spp. are also provided.
- (14559) *WEIHRAUCH, F. & S. WEIHRAUCH*, 2003. Spring Odonata from Alentejo (Portugal), Andalusia and Extremadura (Spain). *Opusc. zool. flumin.* 207: 1-18. — (Hengelerstr. 9, D-80637 München).
An annotated list of 25 spp. recorded on the wing or as exuviae during 2 journeys to SW Iberia in spring 1999 and 2001 is presented. 3 more spp. were recorded as larvae. Phenological data were compared with data from the literature, obtaining particularly noteworthy early records for *Gomphus simillimus*, *Cordulegaster boltonii*, *Brachythemis leucosticta* and *Sympetrum striolatum* for the region. For most spp. recorded, additional notes on biology or an assessment of abundance and distribution in the region in spring are given. The status of *Paragomphus genei*, *Anax ephippiger*, *C. boltonii*, *Oxygastra curtisii*, *Macromia splendens*, *B. leucosticta*, *Sympetrum fonscolombii* and *S. striolatum* is discussed. *Brachytron pratense* was not encountered at localities with former records given in the literature and the possible extinction of the outstanding population in the Coto Doñana is apprehended.