ODONATOLOGICAL ABSTRACTS

1995

(15902) AGRAWAL, V.C. & R.K. GHOSE, 1995. Fauna of Tiger Reserve (Sunderbans, Palamau, Simlipal & Manas). *Fauna Conserv. Areas zool. Surv. India* 8: vi+127 pp. – (Zool. Surv. India, 'M'Block, New Alipore, Calcutta-700053, India).
From the 4 (out of 19) Tiger Reserves in India, the odon. are recorded as follows: Sunderbans (W. Bengal; p. 35): 1 sp., – Manas (Assam; p. 79): 4 spp., – Palamau (Bihar; pp. 95-96): 10 spp., and – Simlipal (Orissa; p. 127): 2 spp. The checklists are presented without annotations and/or comments. – For the odon. fauna of Indravati Tiger Reserve, see *OA* 10816.

(15903) REELS, G.T., 1995. Disturbance to important bat and dragonfly site. *Porcupine* 12: 5. – (26, 6th St., Section C, Fairview Park, Yuen Long, New Territories, Hong Kong, China).
Tai Tong is one of the 2 Hong Kong's best odon. sites and the type locality of Lamelligomphus hongkongensis. It was proposed as a Site of Special Scientific Interest in 1993. Extensive landscaping and habitat disturbance associated with the unauthorised developments in Tai Tong may have impacted severely on its important odon. populations.

(15904) WILSON, K., 1995. Dragonflies, diversity and fish ponds. *Porcupine* 12: 6-7. – (18 Chatsworth Rd, Brighton, BN1 5DB, UK).
With 103 spp. in an area of 1074 km^2 in size, Hong Kong possesses an odon. fauna which is apparently more diverse than anywhere in the Palaearctic. Hong Kong fish ponds support 30 spp. of 6 fam. and, relative to temperate latitudes, the diversity is to be considered outstanding.

1998

(15905) McINTYRE, N.E., 1998. Rescuing damsels in distress: the conservation of damselflies and their habitats. *Arizona riparian Council* 11(3): 3-4. – (Cent. Envir. Stud., Arizona Riparian Council, Arizona St. Univ., P.O. Box 873211, Tempe, AZ 85287-3211, USA).
General on the Zygopt. of Arizona, with a call to minimize large-scale disturbances to riparian habitats until more becomes known how best to conserve damselflies.

(15906) MITCHELL, F.L., 1998. Flying dragons in the backyard. *Pond & Garden*, Kansas 1998 (May/June): 30-35. – (Texas Agric. Exp. Stn, Texas Agric. Extension Serv., Texas A & M Univ. Syst., Rte 2, Box 00, Stephenville, TX 76401, USA).
Technical and other practical hints that are to be considered in water gardening for dragonflies.

(15907) RIDDIFORD, N., 1998. Catàlog de biodiversitat del Parc naturel de s'Albufera de Mallorca. *Invent. tecn. Biodiversitat* 3: 1-88. (Catalan). – (Schoolton, Fair Isle, Shetland, ZE2 9JU, UK).
20 identified odon. spp., recorded from the Park (Mallorca, Baleares, Spain) are listed on pp. 46-47. – For other odon. publications, by the same Author, on the same subject, see OA 11740 and 12496.

(15908) SPIKKELAND, I., 1998. Dyreliv i dammer i Askim. – [Pond animal life in Askim]. *Natur Østfold* 17(1/2): 13-22. (Norw.). – (Buer, N-1870 Ørje).
During 1988-1997, the animal life was investigated in 31 ponds in the parish of Askim, Norway. Hydrological data are presented for all of them, and a

checklist of the recorded Metazoa is provided. This includes 11 odon. spp., among which the nationally redlisted Aeshna cyanea and Libellula depressa are of particular interest.

(15909) TANAKA, B., N. KANIE, T. MINO & A. SHIRAGANE, 1998. The insect fauna between Heisei Memorial Bridge and Takahashi Bridge, margins of Yahagigawa river. *Yahagigawa Kenkyu* 1998(2): 33-73. (Jap., with Engl. s.). – (Authors' addresses not stated).
During a systematic survey (June-Oct. 1996) of a 1.63 km section of the Yahagigawa R. in Toyota-shi, 1036 insect spp. (of 18 orders) were recorded along the banks. A list of 21 odon. spp. is presented on p. 51. – Japan.

1999

(15910) CUTHRELL, D.L., 1999. [Special animal abstract for] *Somatochlora hineana (Hine's emerald dragonfly)*. Michigan Nat. Features Inventory, Lansing. 3 pp. – (Publishers: P.O. Box 30444, Lansing, MI 48909-7944, USA).
The status and global and state rank are stated, and the range, state distribution, recognition, best survey time, habitat, biology, conservation/management and the research needs are outlined.

(15911) [DIETZSCH, B.R.] WHITE, J.J., 1999. A painting of onions by Barbara Regina Dietzsch. *Bull. Hunt Inst. bot. Doc.* 11(2): 10. – (c/o Ed.: Hunt. Inst., Carnegie Mellon Univ., 5000 Forbes Ave, Pittsburgh, PA 15213-3890, USA).
The gouache by B.R. Dietzsch (1706-1783), in possession of Hunt Inst. since 1960, is described and reproduced. In the painting are depicted also 2 common lepidopterans and a libellulid dragonfly.

(15912) LINHART, J., 1999. Phytophilous macrofauna in the Stratiotes aloides vegetation of Lake Łukie, Poland. *Acta Univ. palackianae olomuc.* (Biol.) 37: 67-76. – (Dept Zool. & Anthropol., Palacký Univ., Tř. Svobody 26, CZ-771-46 Olomouc).
The lake is situated in Polesie Natn. Park, E. Poland. In samples taken on 14-VII-1999, 6 anisopt. and 48 zygopt. larvae occurred per 1 m^2, all early instars only. Due to the sampling method, their numbers are underestimated.

(15913) O'BRIEN, M.F., 1999. Michigan Odonata Survey: cooperation yields results, examples from 1998 and 1999. *Newsl. Mich. ent. Soc.* 44(2): 6, with author's portrait. – (Insect Div., Mus. Zool., Univ. Michigan, Ann Arbor, MI 48109-1079, USA).
The Michigan Odon. Soc. is a volunteer group composed of professionals and amateurs. It publishes a quarterly newsletter, has a detailed web site and, starting in 1998, a modest grant from the US Forest Services. It is based at the Univ. Mich. Mus. Zool. and coordinated by the Author. Its mission is to catalog and distribute definitive information on the odon. fauna of Michigan. The Society has been successful due to rapid communication via internet groups and quarterly Newsletter publication. Some examples of the achievements are stated.

(15914) PHOENIX, J., 1999. Die Kirnitzsch/Křinice, ein überregional bedeutsames Fliessgewässersystem in Sachsen und Böhmen: eine Bestandsaufnahme mit Ableitung von Pflege- und Entwicklungsmassnahmen. *SchReihe NatnPark. Sächsische Schweiz* 3: 58-88. (Bilingual: Germ./Czech). – (Goethestr. 22, D-01824 Königstein).
Flora and fauna of the German and Czech sections of the Kirnitzsch/Křinice R. are reviewed and the required management measures are outlined in detail. 24 odon. spp. were recorded there, Cordulegaster bidentata is here reported for the first time from Saxony, Germany.

(15915) ROLFF, J. & B. SCHRODER, 1999. Regaining the water: a simulation model approach for Arrenurus larvae (Hydrachnellae) parasitizing damselflies (Coenagrion puella: Odonata). *In*: J. Bruin, L.P.S. van der Geest & M.W. Sabelis, [Eds], *Ecology and evolution of the Acari*, pp. 359-370, Kluwer, Dordrecht. – (Authors' addresses not stated).
A matrix population model is presented, which describes the population dynamics and the return rate of parasitic Arrenurus larvae to the pond. This is a function of hosts' post-emergence life history and mating success. 3 aspects were simulated, viz. (1) the change in daily miteload, (2) the impact of weather on hosts oviposition probability, and (3) a combination of both. – It was found that a high abundance of larval water mites reduces their return rate due to the high parasite-induced mortality of the hosts. Reduced oviposition probabilities of C. puella also decrease dramatically the number of mites detaching. The model may be applicable to other water-mite/host systems if the lifetable data of the host are known.

(15916) YANOVIAK, S.P., 1999. Effects of leaf litter species on macroinvertebrate community properties and mosquito yield in neotropical tree hole microcosms. *Oecologia* 120: 147-155. – (Evergreen St. Coll., Lab. I, Olympia, WA 98505, USA).
Detritus quality and quantity affect macroinvertebrate productivity and distribution in many freshwater ecosystems. This study experimentally investigated the effects of leaf litter from Ceiba pentandra, Dipteryx panamensis, Ficus yoponensis and Platypodium elegans, and abundance in artificial water-filled tree holes in a lowland moist forest in Panama. Species composition was similar among treatments, but species richness and longevity differed among litter types and were consistently highest with Platypodium litter. Similar patterns were observed in natural tree holes of the focal tree spp. The odon. were represented by Mecistogaster spp., occurring in natural tree holes. The odon. mean percent abundances among different leaf types in the field experiment were: Ceiba 0%, Dipteryx 0.1%, Ficus 0% and Platypodium 0.1%.

2000

(15917) ALCÁNTARA, F., J. GARCIA, P. PADILLA & C. DELGADO, 2000. Dosis letales de Dipterex 80% p[olvo] s[oluble] para el control de nayadas de Gomphaeschna sp., Tramea cophysa y T. calverti (Odonata). *Folia amazon.* 10(1/2): 73-79. (With Engl. s.). – (Inst. Invest. Amazonia peruana, Aptdo 784, Iquitos, Peru).
In laboratory, a 0.5 mg/l concentration of the insecticide, "Dipterex", caused within 24 h a 100% mortality in Gomphaeschna larvae, and a 4.5 mg/l concentration did so in the 2 Tramea spp.

(15918) AYERS, M.A., J.G. KENNEN & P.E. STACKELBERG, 2000. *Water quality in the Long Island-New Jersey coastal drainages, New York and New Jersey, 1996-1998.* [U.S. Geol. Surv. Circular 1201]. 40 pp. ISBN 0-607-95410-8. – (Free on application to: U.S. Geol. Surv., Information Serv., Bos 25286 Federal Center, Denver, CO 80225, USA).
Major findings about water quality in New Jersey and on Long Island, NY, that emerged from an assessment conducted 1996-1998 by the National Water-Quality Assessment (NAWQA) Program, are outlined. Numerous references to aquatic (invertebrate and other) communities and to several aquatic insect orders are made. – (*Abstractor's Note*: More than 30 similar circulars, on various US regions, are available free from the above address.)

(15919) NACHTIGAL, W. & A.B. KESEL, 2000. Biologisch komponierte Materialien und Systeme: Schwerpunkt "Biomimetische Materialien". *Mag. Forschung* 2000(1): 49-56. – (First Author: Allg. Biol., Univ. Saarland, D-66041 Saarbrücken).
The membrane of the Orthetrum cancellatum wing is used among the examples of mechanical characterisation of biological materials, serving as a basis for the biomimetical development of new (industrial) materials.

(15920) REEVES, W.K., J.B. JENSEN & J.C. OZIER, 2000. New faunal and fungal records from caves in Georgia, USA. *J. Cave Karst Stud.* 62(3): 169-179. – (First Author: Dept Ent., 114 Long Hall, Clemson Univ., Clemson, SC 29634, USA).
The sand-dwelling Progomphus obscurus and Cordulegaster sp. are recorded as common (24-V-2000) in the Tennille Lime Sinks stream, Washington Co., GA, USA.

(15921) WILSON, K.D.P., 2000. Aciagrion tillyardi Laidlaw (Odonata: Zygoptera), a damselfly new to Hong Kong. *Porcupine* 21: 9-11. – (18 Chatsworth Rd, Brighton, BN1 5DB, UK).
A. tillyardi is placed on record, described and illustrated, biological notes are provided, and arguments are outlined for the rejection of F.C. Fraser's synonymy with A. approximans (Sel.).

2001

(15922) BECHARA, E.J.H. & C.V. STEVANI, 2001. Degradação de resinas automotivas acrilo-melaminicas por ovas de libélulas. – [Damage to the car coating by dragonfly eggs]. *Jorn. Conselho reg. Quimica* (IV) 10(47): 4-5. (Port.). – (Authors' postal addresses not stated).
Dragonfly eggs, deposited on cars, are causing irreversible damage to the coating, when cars are parked in the sunshine and the surface temperature exceeds 70°C. The involved chemical processes are discussed.

(15923) SCHMIDT, B.R. & J. VAN BUSKIRK, 2001. Verhalten, Wachstum und Morphologie von Kammolch-Larven in der An- und Abwesenheit von Libellenlarven. *Rana* (Sonderh.) 4: 179-191. (With

Engl. s.). – (First Author: Zool. Inst., Univ. Zürich, Winterthurerstr. 190, CH-8057 Zürich).
It was tested for predator-induced plasticity in behavioural, morphological and life-history traits of larvae of the newt Triturus cristatus, using Aeshna cyanea larvae as predators. There was no evidence for plasticity in morphology or life history in a controlled experiment, neither evidence was found for morphological plasticity in samples taken from natural ponds. In contrast to other newt spp., T. cristatus larvae were more active in the presence of predatory odon. It is not known why phenotypic plasticity in T. cristatus is different from the predator-induced defences seen in other newt spp. It is suggested that differences between newt spp. in plasticity and predator-prey interactions may affect their distribution and abundance.

(15924) TÓTH, S., 2001. Checklist of dragonflies of Somogy county (Insecta: Odonata). *Natura somogyiensis* 1: 93-99. (Hung., with Engl. s.). – (Széchenyi u. 2, H-8420 Zirc).
The odon. fauna of the county is reviewed. Among the 55 recorded spp., Pyrrhosoma nymphula interposita, Aeshna viridis, Gomphus flavipes, Ophiogomphus cecilia, Leucorrhinia caudalis and L. pectoralis are of particular interest; – Somogy Co., Hungary.

2002

(15925) BAAIJENS, A. & R. JOOSSE, 2002. *Vlinderen Libellenwerkgroep Zeeland: jaaroverzicht 1999 & 2000.* – *[Lepidoptera and Odonata Working Group Zeeland: annual review 1999 & 2000]*. VLWZ, Oost-Souburg. 125 pp. ISBN none. (Dutch). – (c/o A. Baaijens, Grote Abeele 40, NL-4388 VW Oost-Souburg).
A report on the 33 odon. spp. known from the prov. of Zeeland, the Netherlands appears on pp. 97-123, with a concluding comment by *P. Geene* (p. 123). Information on the current status, habitats and adult phenology, as well as a distribution map and a phenology/abundance graph are provided for all spp.

(15926) HAAKS, M. & A. LEHMANN, 2002. Some observations on dragonflies (Insecta, Odonata) throughout New Zealand. *Weta* 24(1): 13-17. – (First Author: Herderstr. 6, D-22085 Hamburg).
Within the framework of a study of the coastal vegetation of New Zealand, some observations on dragonflies were made from Nov. 1999 to Apr. 2000. Commented records of 8 spp. from 8 localities are reported.

(15927) HAGUET, G., M. CHEVRIER & E. BRUNEL, 2002. *Les invertébrés de la dune de Bon Abri.* GRETIA, Rennes. 24 pp., 2 app. excl. ISBN none. – (Groupe de l'étude des invertébrés armoricains, Equipe Museol., Univ. Rennes-I, F-35042 Rennes-Cedex).
The dune of Bon Abri is situated in the Baie de Saint-Brieuc Nature Reserve (dép. Côtes d'Armor, Bretagne, France). From a stream and from the central marsh, 12 odon. spp. are listed.

(15928) JAKAB, T., Z. MULLER, G. DEVAI & B. TÓTHMÉRÉSZ, 2002. Dragonfly assemblages of a shallow lake type reservoir (Tisza-tó, Hungary) and its surroundings. *Acta zool. Acad. Sci. hung.* 48(3): 161-171. – (Dept Ecol. & Hydrobiol., Debrecen Univ., P.O. Box 71, H-4010 Debrecen).
Based on a 2-yr study, the odon. fauna (39 spp.) of the Tisza-tó reservoir, Hungary is analysed. 5 types of water bodies were distinguished. Species diversity was the highest in natural pools (34 spp.), and was the lowest in the Tisza R. (12 spp.).

(15929) LAU, M., 2002. New locality records for species of conservation concern. *Porcupine* 26: 19-20. – (c/o Ms E. Tam, Dept Ecol. & Biodiv., Univ. Hong Kong, Hong Kong, China).
Hong Kong records are listed for 12 odon. spp.

(15930) LEMOINE, G., 2002. Sur les traces des insectes dans les dunes flamandes: week-end à Zuydcoote. *Insectes* 126: 25-27. – (Author's address not stated).
Lestes barbarus, Crocothemis erythraea and Sympetrum flaveolum are mentioned.

(15931) OCHARAN, R. & F.J. OCHARAN, 2002. Odonatos del Valle de Cuartango (Álava). *Boln Asoc. esp. Ent.* 26(1/2): 97-110. (With Engl. s.). – (Area Zool., Depto Biol. Organismos y Sistemas, Univ. Oviedo, ES-33071 Oviedo).
The Álava (N. Spain) 1994-1996 records for 39 spp. are presented and the earlier records are revised. The records of Gomphus vulgatissimus and Oxygastra curtisii are significantly expanding the hitherto known ranges of these spp. in the Iberian Peninsula.

(15932) REELS, G.T., 2002. Hong Kong flying colour. 3. Dragonflies. *Porcupine* 26: 23. – (26, 6th Str., Section C, Fairview Park, Yuen Long, New Territories, Hong Kong, China).
A critical book review of the picture book described in *OA* 14554.

(15933) VALLADARES, L.F., F.J. VEGA, R.A. MAZÉ, J.A. RÉGIL & F. GARCIA-CRIADO, 2002. Biodiversidad de los macroinvertebrados acuáticos del Parque Natural de Valderejo (Álava): implicaciones en conservación. *Boln Assoc. esp. Ent.* 26(3/4): 37-55. (With Engl. s.). – (Depto Biol. Animal, Fac. Cien. Biol. & Ambientales, Univ. León, ES-24071 León).
17 odon. spp. are listed from the Park. All of these were recorded from the Basque Country (= Álava), Asturia, Spain previously (cf. *OA* 6055 and 15931).

2003

(15934) [BANGLADESH] NATURE CONSERVATION MANAGEMENT, [Compilers], 2003. *Secondary data collection for pilot protected areas: Lawachara National Park*. Ministry Envir. & Forest, Dhaka. ii + 57 pp. ISBN none.
The Park (surface 1531 ha) is part of the W. Bhanugach Reserved Forest, Kamalgonj, Moulavibazar distr. A list of 17 odon. spp. is provided (p. 51).

(15935) BERGSTEN, J., P. EKERHOLM, S. HELLQVIST, J. HILSZCZANSKI, A. NILSSON, R. PETTERSSON & T. WERNER, 2003. Insects and arachnids of the Romelsön island, Västerbotten province, Sweden. *Natur i Norr* 22(2): 65-87. (Swed., with Engl. s.). – (Johannes.Bergsten@eg.umu.se)
6 odon. spp. are listed from the island (4.5×1.9 km; < 1 km offshore), N. Sweden.

(15936) CONSEIL GENERAL DES LANDES DE GASCOGNE & PARC NATUREL RÉGIONAL DES LANDES DE GASCOGNE, [Publishers], 2003. *Bilan des inventaires entomologiques réalises dans forêts Galeries des Leyres de 1999 à 2002 (rhopalocères, odonates et orthoptères)*. 19 pp. ISBN none.
35 odon. spp. are listed, and annotations on Coenagrion mercuriale, Gomphus vulgatissimus, Leucorrhinia albifrons and L. pectoralis are provided; – Gascogne, France. The exuviae were identified by C. Archimbaud.

(15937) DiSALVO, C., R. ORR & D. FOOTE, 2003. Dragonflies and damselflies: invertebrate indicators of ecological health. *NPS Natural Resource Year in Review* 2003(7): 86-87. – (Authors' postal addresses not stated).
As insect predators low in the food chain, odon. reflect changes in the health of aquatic ecosystems much faster than can be recognised through monitoring most other animal or plant groups. Using these indicator spp. in baseline surveys provides a measure of the current health of the various aquatic systems in a park and is an excellent monitoring tool for predicting future changes in those environments. Information on the presence and function of odon. in national parks is important if an ecosystem approach to management is to be successful. Yet, to date, only a handful of parks have begun this type of monitoring. Some examples from 4 US national parks and reserves are briefly described, and the remarkable ecological diversification in Megalagrion, during its evolution in the Hawaii, is outlined.

(15938) ENGLUND, R.A. & K. ARAKAKI, 2003. *Report on long-term aquatic insect monitoring in 2002 by Hawaii Biological Survey, Bishop Museum in Pelekunu Valley, Moloka'i, Hawai'i*. Hawaii Biol. Surv., Honolulu [Contrib. No. 2003-001]. ii+10 pp. – (Hawaii Biol Surv., Bishop Mus., 1525 Bernice St., Honolulu, HA 96817, USA).
Includes 10 odon. spp., of which 6 endemic, 2 indigenous and 2 introduced spp.

(15939) GREENWOOD, M.T. & P.J. WOOD, 2003. Effects of seasonal variation in salinity on a population of Enochrus bicolor Fabricius, 1792 (Coleoptera: Hydrophilidae) and implications for other beetles of conservation interest. *Aquat. Conserv. Marine Freshw. Ecosyst.* 13: 21-34. – (Dept Geogr., Loughborough Univ., Loughborough, Leicestershire, LE11 3TU, UK).
An E. bicolor population was monitored during March 1997-March 2001 from a small saltmarsh coastal pool in Essex, UK. Ischnura elegans (common) and Aeshna mixta (rare) are among the taxa recorded. They were frequently associated with mild-brackish and freshwater.

(15940) KUMAR, A. & G. SHARMA, 2003. [Some selected fauna of Asola-Bhatti Wildlife Sanctuary, Delhi]: Odonata. *Fauna Conserv. Areas zool. Surv. India* 16: 23-26. – (Northern Regional Stn, Zool.

Surv. India, Dehra Dun-248195, India).
This is a man-made and walled-in wildlife sanctuary on the fringes of the metropolitan city of Delhi, India (surface ca 2760 ha). The undulating landscape (alt. 240-310 m) has numerous storm water drains but no permanent natural water, except for 27 water pits, ever developed by excavating the land for mining purposes. 12 spp. are listed, with locality data and dates.

(15941) MARCH, J.G., J.P. BENSTEAD, C.M. PRINGLE & M. LUCKYMIS, 2003. Benthic community structure and invertebrate drift in a Pacific island stream, Kosrae, Micronesia. *Biotropica* 35(1): 125-130. – (First Author: Dept Biol., Washington & Jefferson Coll., 60 South Lincoln St., Washington, PA 15301, USA).
In Oct. 2000, a short-term study was conducted of the Inem R. on Kosrae, E Caroline Isls, W Pacific. The benthic invertebrate community was extremely depauperate, insects were represented only by larval Chironomidae, Lepidoptera (Pyralidae) and a few Odon. The latter occurred also in drift samples that contained more taxa. Names of the spp. are not stated. The low benthic macroinvertebrate biodiversity and density are consistent with the evidence from other Pacific island streams.

(15942) NIKULA, B., 2003. *Attenuated bluet damselfly, Enallagma daeckii*. Natural Heritage Endangered Species Program, Massachusetts, Westborough. 2 pp. – (Publishers: c/o Massachusetts Div. Fish. & Wildlife, Rte 135, Westborough, MA 01581, USA).
The federal and state status are stated, the description is provided, and the habitat, life history, behaviour, general range, population status in Massachusetts, and management recommendations are outlined. A flight period graph is also included.

(15943) NIKULA, B., 2003. *Subarctic darner dragonfly, Aeshna subarctica*. Natural Heritage Endangered Species Program, Massachusetts, Westborough. 2 pp. – (Publishers: c/o Massachusetts Div. Fish. & Wildlife, Rte 135, Westborough, MA 01581, USA).
The subjects covered are the same as listed in *OA* 15942.

(15944) SAMWAYS, M.J. & B.C. WILMOT, 2003. Odonata. *In*: I.J. de Moor, J.A. Day & F.C. de Moor, [Eds], *Guides to the freshwater invertebrates of southern Africa*, Vol. 7, pp. 160-212. Water Res. Commission, Gezina. Softcover, spiral binding (17.0×24.5 cm). ISBN 1-77005-017-5. Price of the vol. (x+288 pp.; incl. also Ephemeroptera & Plecoptera): € 148.04 net. – (Publishers: P. Bag X03, Gezina-0031, SA).
Keys to the families and genera of the regional larvae and a checklist of the odon. taxa of southern Africa, with summaries of their geographical distribution. – This is the first identification work for the larvae of S. African fauna. Though very useful, the high price of the book may appear prohibitive.

(15945) TAM, T.W., 2003. Four new dragonfly records for Hong Kong. *Hong Kong Biodiv.* 2003(5): 8-9. – (Agric., Fish. & Conserv. Dept, 7/F, Cheung Sha Wan Government Offices, 303 Cheung Sha Wan Rd, Kowloon, Hong Kong, China).
Pseudagrion pruinosum fraseri, Anax n. nigrofasciatus, Cephalaeschna klotsi and Trithemis pallidinervis are brought on record. Precise locality data and collection dates are stated, and phot. of all spp. are provided.

(15946) WOOTTON, R.J., R.C. HERBERT, P.G. YOUNG & K.E. EVANS, 2003. Approaches to the structural modelling of insect wings. *Phil. Trans. R. Soc. Lond.* (B) 358: 1577-1587. – (First Author: Sch. Biol. Sci., Univ. Exeter, Hatherly Labs, Prince of Wales Rd, Exeter, EX4 4PS, UK).
Insect wings lack internal muscles, and the orderly necessary deformations which they undergo in flight and folding are in part remotely controlled, in part encoded in their structure. This factor is crucial in understanding their complex, extremely varied morphology. Models have proved particularly useful in clarifying the facilitation and control of wing deformation. Their development has followed a logical sequence from conceptual models through physical and simple analytical to numerical models. All have value provided their limitations are realized and constant comparisons made with the properties and mechanical behaviour of real wings. Numerical modelling by the finite element method is by far the most time-consuming approach, but has real potential in analysing the adaptive significance of structural details and interpreting evolutionary trends. Published examples are used to review the strengths and weaknesses of each category of model, and a summary is given of new work using finite element

modelling to investigate the vibration properties and response to impact of hawkmoth wings.

2004

(15947) BERNARD, M.E., 2004. Predator-induced phenotypic plasticity in organisms with complex life histories. *Annu. Rev. Ecol. Evol. Syst.* 35: 651-673. – (Sect. Evol. & Ecol., Cent. Pop. Biol., Univ. California, Davis, CA 95616, USA).
Predator-induced phenotypic plasticity is widespread in nature and includes variation in life history, morphology and behaviour. In organisms with complex life histories, predator-induced phenotypic plasticity in the larval period has been widely documented; studies testing for predator-induced changes in age and size at metamorphosis are here summarized and include Lestes sponsa (*OA* 13960) and Leucorrhinia dubia (*OA* 14723). Several models predict how organisms should alter their size at and time to metamorphosis in response to an increased risk of predation. A survey of empirical studies finds that these theoretical predictions are frequently met. However, no one model performs the best. Additionally, there are several results not predicted by any model. Predator-induced plasticity in metamorphic traits may be related to predator-induced changes in larval morphology and behaviour. Predictions of predator effects on larval traits are generally met, except for direct costs of predator-induced morphological phenotypes. Future work should incorporate more detailed studies of growth rate, morphology, and behaviour during the larval period, as well as studies of size-specific mortality rates in the presence and absence of predators.

(15948) BROOMHALL, S.D., 2004. Egg temperature modifies predator avoidance and the effects of the insecticide endosulfan on tadpoles of an Australian frog. *J. appl. Ecol.* 41: 105-113. – (Richard Shine Lab., Biol. Sci., Heydon Laurence Bldg, Univ. Sydney, NSW 2006, AU).
Eggs of Limnodynastes peronii were reared at 2 temperatures that simulate naturally occurring cool and warm temperature regimes (14±3°C and 20±3°C). Tadpoles were then exposed to sublethal concentrations of the organochlorine insecticide endosulfan, at a common temperature. Egg-rearing temperature and endosulfan interacted to affect tadpole length. Tadpoles exposed to endosulfan were significantly shorter than control tadpoles and they were more vulnerable to capture by Hemianax papuensis larvae than controls of the same size. While warm egg-rearing temperatures significantly decreased vulnerability to capture, tadpoles were proportionally more adversely affected by endosulfan. Thus, egg-rearing temperature altered predator avoidance and changed the way in which endosulfan affected growth. Endosulfan significantly decreased feeding, growth and predator avoidance.

(15949) CHANDRA, K. & P.T. RAJAN, 2004. Faunal diversity of Mount Harriet National Park (South Andaman). *Conserv. Area Ser. zool. Surv. India* 17: xxi+142 pp., col. figs 1-50 excl. – (First Author: Cent. Regional Stn, Zool. Surv. India, 424 New Adarsh Colony, Jabalpur-482002, Madhya Pradesh, India).
On pp. 14-18, 15 odon. spp. are listed, and their distribution in the Andaman archipelago is stated. Prodasineura verticalis andamanensis is endemic.

(15950) CHOU, I., S. WANG & R. XIA, 2004. *A history of entomology in modern China.* [Transliteration of publisher's name & address not provided], 242 pp., 12 col. pls excl. Hardcover (21.5×29.5 cm). ISBN 7-5062-6765-9. – (Chin., with Engl. s.).
The history of entomology in China (incl. Taiwan) is traced from the late 19th century to present. Various references to the odonatol. work and a portrait of Prof. H.-f. Chao (1917-2001) are included.

(15951) CHOVANEC, A., J. WARINGER, R. RAAB & G. LAISTER, 2004. Lateral connectivity of a fragmented large river system: assessment on a macroscale by dragonfly surveys (Insecta: Odonata). *Aquat. Conserv. Mar. Freshw. Ecosyst.* 14: 163-178. – (First Author: Abt. Aquat. Ökol., Umweltbundesamt, Spittelauer Lände 5, A-1090 Wien).
The ecological status of floodplain areas along the Austrian section of the Danube was assessed by an approach based on odon. surveys. Although this river section contains a relatively high portion of the river-type-specific alluvial floodplain areas, most of them are influenced by river regulation and damming. A key element of the assessment procedure, which is oriented towards the new EC Water Framework Directive, is the Odonate Habitat Index. Classification of ecological status is based on the comparison between the status quo and reference conditions derived from a historical situation minimally influenced by human activities. Data from 408

sites from 14 investigation areas were used. 10 of the 14 areas were ranked in class II ('good ecological status') within the 5-tiered system, which is the level of ecological status targeted in the directive. One area corresponds to the reference condition (class I, 'high ecological status'), and 3 areas do not meet the quality objective (class III, 'moderate ecological status'). A total of 49 spp. were found along the whole section, which represents 82% of the river-type-specific reference list.

(15952) DE BLOCK, M. & R. STOKS, 2004. Life history responses depend on timing of cannibalism in a damselfly. *Freshw. Biol.* 49: 775-786. – (First Author: Dept Biol., Univ. Antwerp, Groenenborgerlaan 171, B-2020 Antwerpen).
Cannibalism has often been suggested as an important mechanism to reach the necessary developmental stage and size before a critical time horizon is reached, but this role has been largely unexplored. Effects of cannibalism on the life history of Lestes viridis were studied here under combinations of a time constraint (by manipulating the perceived time available in the growth season) and a biotic constraint (density). Larvae had a faster development and growth rate when reared at high time stress (late photoperiod). They also had a higher growth rate and mass at emergence when cannibalism occurred (density 2 and 4). Cannibalism occurred earlier at higher density. Accelerated life history repsonses (faster development and growth rate) and a higher mass at emergence were dependent upon the timing of cannibalism. Responses were more pronounced or only present if cannibalism occurred early in the larval period. The data suggest that cannibalism may not only act as a lifeboat mechanism by enabling cannibals to survive detrimental ecological conditions, but may also act as a compensatory mechanism to keep life history variables near-optimal at life history transitions, even under sub-optimal conditions.

(15953) HANEL, L., [Ed.], 2004. *Vážky 2004. Sborník referátů 7. celostátního semináře odonatologu v Krušných horách.* – *[Dragonflies 2004: Proceedings of the 7th national conference of odonatologists at Krušné hory]*. Ces. Svaz Ochr. Přir., Vlašim. 149 pp. Softcover (14.3×20.5 cm). ISBN 80-86327-42-6. (Mostly Czech, with Engl. s's). – (Available from: ČSOP, Plátnikova 264, CZ-258-01 Vlašim).
Rus, I.: A list of dragonflies (Odonata) found during the 6th Odonatologic Days in June 2002 in South Moravia (pp. 6-9); – *Honcú, M.*: A list of dragonflies (Odonata) found during the 7th Odonatologic Days in July 2004 in the Krušné hory mountains (southern Bohemia) (pp. 10-16); – *Dolný, A. & F. Harabiš*: The current state of knowledge about dragonflies (Odonata: Libellulidae) of the Czech part of Silesia Leucorrhinia pectoralis (pp. 17-21); – *Honcú, M. & O. Roztočil*: The results of monitoring of the dragonflies of the genus Leucorrhinia (Odonata: Libellulidae) in the district Česká Lipa (northern Bohemia) in 2003-2004 (pp. 22-34); – *Voigt, H.*: Verbreitung der Leucorrhinia-Arten (Odonata) in Sachsen (Deutschland) (pp. 35-40); – *Phoenix, J.*: Grenzübergreifende Libellenstudien (Cordulegastridae, Gomphidae) in der Sächsisch-Böhmischen Schweiz (Elbsandsteingebirge) (pp. 41-47); – *Hesoun, P.*: The dragonfly Coenagrion lunulatum (Odonata: Coenagrionidae) in the Jindřicho-hradecko region (Bohemia): the present and the future (pp. 48-56); – *Zelený, J.*: Dragonflies (Odonata) in the Bohemian Forest (pp. 57-62); – *Honcú, M.*: Dragonflies (Odonata) in the National Nature Reserve Novozámecký rybník (northern Bohemia) (pp. 63-78); – *Kysela, M.*: Faunistical note on dragonflies in the vicinity of the town Netolice (southern Bohemia, Czech Republic) (pp. 79-81); – *Chochel, M.*: Interesting occurrence of dragonflies (Odonata) in the mining landscape near to the Jirkov (northern Bohemia) (pp. 82-84); – *Dolný, A. & B. Pazderová*: The spring, the unusual larval biotope of the dragonfly Libellula depressa (Odonata: Libellulidae) (pp. 85-88); – *Cieśla, M.*: Dragonflies (Odonata) and artificial garden ponds (pp. 89-90); – *Rus, I.*: The current state of faunistical research of dragonflies (Odonata) in Czech Republic within the "Project Dragonflies" (pp. 91-94); – *Dolný, A. & A. Krupniková*: The current state of ecological analysis of the project "Mapping of dragonflies (Odonata) within Czech Republic" (pp. 95-107); – *Hanel, L.*: Synonyms of science and Czech names of native dragonflies (Odonata) (pp. 108-147); – *The directory of participants* (pp. 148-149).

(15954) HILFERT-RÜPPELL, D., 2004. *Optimierung des Fortpflanzungsverhaltens: wichtige Einflussgrössen auf Territorialität und auf Paarungen von europäischen Prachtlibellenmännchen (Odonata: Zygoptera)*. PhD diss. Naturw. Fak. Tech. Univ. Braunschweig. 215 pp. – (Author: An der Wasserfurche 32, D-38162 Cremlingen-Destedt).

The factors contributing to the variability and optimisation of the reproductive behaviour in Calopteryx s. splendens in Germany and in S. France and in C. haemorrhoidalis in S. France were studied. Differences in reproductive behaviour among spp. and geographic regions were detected. In the experiments, the main determinant for the reproductive behaviour was the success through copulations. After a successless predation attempt by frogs or waterspiders, ♂♂ left their territories if they had become territorial only shortly prior to the attack. They showed more site fidelity if they have courted or copulated in their territory prior to the attack; probably so because of the higher resource value of the territory in this case. There was no morphological distinction between the ♂♂ that did and those that did not copulate. The success to form a mating wheel from a tandem was positively correlated with the preceeding courtship. More territorial flights and warning displays against other ♂♂ were performed after a copulation. In enclosure experiments, ♂♂ with an early copulation experience achieved a higher number of further copulations, whereas their physical features (fat, size, wingspot) did not differ significantly between the mated and non-mated ♂♂. An alternative reproductive behaviour takes place more often in the northern than in the southern C. s. splendens populations. The winners of fight do not differ morphologically from the loosers. Experimentally, a significant effect of the preceeding copulations on the duration and outcome of the ♂-♂ fights was shown. Contests between the same opponents were decided more quickly after a mating than without mating experience. ♂♂ that had previously lost a fight, won the contest with the same opponent after a copulation in significantly more cases.

(15955) KUMAR, A., 2004. [Some selected fauna of Gobind Pashu Vihar]: Insecta: Odonata. *Conserv. Area Ser. zool. Surv. India* 18: 5-8. – (Northern Regional Stn, Zool. Surv. India, Dehra Dun-248195, India).
The records are presented of 12 spp., collected (1993--1996) from the Gobind Wildlife Sanctuary, Uttarkashi distr., Uttar Pradesh, India. Due to a printing error, the name of 1 sp. is not shown.

(15956) LIASHENKO, A.V., A.A. SILAYEVA, A.A. ETINGOVA & V.V. MAKOVSKIY, 2004. Comparative characteristics of biodiversity of ecological assemblages of macroinvertebrates in the Kilia delta of the Danube. *Gidrobiol. Zh.* 40(6): 18-35. (Russ., with Engl. s.). – (Inst. Gidrobiol. NAN Ukrainy, Kiev, the Ukraine).
In the macroinvertebrate samples from the Kilia delta, the Ukraine, the odon. were represented by Coenagrion armatum and Ischnura elegans.

(15957) LIN, S.-C. & C.-S. CHEN, 2004. Egg and larval developments of the Taiyal darner Aeshna petalura taiyal Asahina (Odonata, Aeshnidae) at the Mt. Hohuan. *Endemic Species Res.* 6(1): 29-38. (Chin., with Engl. s. and tab. & fig. captions). – (First Author: Endemic Species Res. Inst., Chichi, Nantou, Taiwan).
A. p. taiyal is endemic to Taiwan, where it occurs widely in the mountain areas above the elevation of 1500 m. Its larval habitat was adversely affected by human activities, such as pond construction, water pollution and fish releasing. As shown in the present study (conducted 1997-2000), the egg stage lasts about 10 months: oviposition occurs at the end of the summer, eggs hibernate in a diapause condition, and hatch in the following spring. At 2 sampling sites, larvae were either univoltine or semivoltine. For conservation of the sp., the protection of lakes and their environs is recommended.

(15958) MARTYNOV, V.V. & A.V. MARTYNOV, 2004. Materials to dragonfly fauna (Insecta, Odonata) of Lugansk district. *Vest. Zool.* 38(6): 74. (Russ., with Engl. title in contents tab.). – (Authors' addresses not stated).
Records of 37 spp. (1996-2004); – the Ukraine.

(15959) MEDIANERO, E. & M. SAMANIEGO, 2004. Comunidad de insectos asociados a condiciones de contaminación en el Rio Curundú, Panamá. *Folia ent. mex.* 43(3); 279-294. (With Engl. s.). – (Second Author: Inst. Smithsonian Invest. Trop., Apdo 169, Balboa, Ancón, Panamá).
The abundance of 8 odon. gen. at 8 sampling stations is shown in a tab., but no reference to the odon. is made in the text.

(15960) OVSEC, D.J., 2004. Živali v simbolih in vražah: kačji pastirji. – [Animals in symbols and superstitions: dragonflies]. *Gea*, Ljubljana 14(9): 37. (Slovene). – (Župančičeva 12, SI-1000 Ljubljana).
A short note, describing 2 traditional superstitions about dragonflies in Slovenia, based on literature.

(15961) PRASAD, M., 2004. [Fauna of Desert National Park, Rajasthan]: Insecta: Odonata. *Conserv. Area Ser. zool. Surv. India* 19: 51-58. – (Sajjan Apt, 8/1 A Uma Kant Sen Lane, Paikpara, Calcutta--700030, India).
A list of 11 spp., collected in 1996. Selysiothemis nigra represents only the second record from Rajasthan, India. For all spp., the measurements of abdomen and fore- and hindwings are provided.

(15962) PRESTON, D.J., M.K.K. McSHANE, N.L. EVENHUIS, G.A. SAMUELSON, K.T. ARAKAKI & D.A. POLHEMUS, 2004. *Arthropod survey of the Waiākea 1942 Lava Flow Natural Area Reserve and selected Wipuka within the Mauna Loa Kipuka Mosaic, Hawai'i.* Hawaii Biol. Surv., Honolulu [Contrib. No. 2004-009]. ii+44 pp. – (Hawaii Biol. Surv., Bishop Mus., 1525 Bernice St., Honolulu, HA 96817-2704, USA).
5 odon. spp. were recorded during the present survey, notably Megalagrion peles and Anax strenuus. The historic record yielded 5 other Megalagrion spp. known to inhabit areas within the proposed NARS extension.

(15963) RELYEA, R.A. & J.R. AULD, 2004. Having the guts to compete: how intestinal plasticity explains costs of inducible defences. *Ecol. Lett.* 2004(7): 869-875. – (Dept Biol. Sci., Univ. Pittsburgh, Pittsburgh, PA 15260, USA).
Predators commonly induce phenotypic changes that make prey better at surviving predation at the cost of reduced growth. While there is a good understanding of how trait changes affect predation risk, a mechanistic understanding of why predator--induced phenotypes differ in growth is lacking. Here, using 2 mesocosm experiments with Rana sylvatica tadpoles and caged Anax larvae as predators, phenotypic plasticity theory is combined with predictions from optimal digestion theory to demonstrate that intra- and interspecific competition induced relatively long guts, while predators induced relatively short guts. The longer guts induced by competition appear to be an adaptive response that allows more efficient digestion and more rapid growth, whereas the shorter guts induced by predators appear to result from a trade-off of building larger tails in predator environments at the cost of smaller bodies.

(15964) SOLEM, B., 2004. *Selected Howard county odonates.* Maryland Ornithol. Soc., Howard/MD. 6 pp. – (Author's address not stated).
A pictorial key to 24 common spp., mostly Anisoptera. It includes the information on habitats and adult phenology. The graphs of the latter also indicate seasonal abundance of each sp.

(15965) VEGA, F.J., F. GARCIA-CRIADO & L.F. VALLADARES, 2004. Odonatofauna del Espacio Natural Noces del Alto Ebro y del Rudrón (Burgos, España). *Boln Soc. ent. aragon.* 34: 147-150. (With Engl. s.). – (First Author: Depto Biol. Animal, Fac. Cien. Biol. & Ambientales, Univ. León, ES-24071 León).
22 spp. are listed from this Nature Reserve, N. Burgos prov., N. Spain. Ceriagrion tenellum and Gomphus pulchellus are for the first time reported from the province. The occurrence of Coenagrion scitulum is of particular interest.

(15966) YAKOVLEV, V.A., 2004. A faunistic review of freshwater zoobenthos of north-eastern Fennoscandia. *Biol. inland Waters* 2004(3): 16-23. (Russ., with Engl. s.). – (St. Univ. Kazan, Kremlevskaya 18, RUS-420008).
On the basis of the 1980-1997 sampling, an analysis of the composition and genesis of the main freshwater invertebrate groups of the Murmansk region (Russia), Finnish Lapland and NE Norway is presented. 20 odon. spp. were recorded, 8 spp. are briefly commented upon, but a checklist is not provided.

2005

(15967) ABBOTT, J.C., 2005. *Dragonflies and damselflies of Texas and the South-central United States (Texas, Louisiana, Arkansas, Oklahoma, and New Mexico).* Princeton Univ. Press, Princeton & Oxford. viii+344 pp. Hardcover (19.2×24.0 cm). ISBN 0-691-11363-7. Price € 94.91 net. – (Publishers: 41 William Str., Princeton, NJ 08540, USA; – or: 3 Market Pl., Woodstock, Oxfordshire, OX20 1SY, UK).
This handbook covers 263 regional spp., with introductory chapters on "Habitats and zoogeography of the South-central United States", "Life history of Odonata", "Seasonality of Odonata in the South-central United States", "Conservation", "Studying Odonata", "Photographing Odonata" and "External anatomy of adult Odonata". All taxa are keyed. Species accounts include sections on regional and general distribution, flight season, identification and

habitat; with discussion and references under each species heading. Col. portraits and regional distribution maps are provided for all spp. The identification is facilitated by 32 textfigs, showing structural peculiarities. The regional bibliography is extensive (though not exhaustive). Along taxonomic nomenclature, Engl. common names are used throughout, but the importance of the former is emphasized and its use advocated. – A splendid and well-balanced work, the reflection of an outstanding specialist ! The Author (born 1972) is Lecturer in the Section of Integrative Biology, Curator of the Brackenridge Field Laboratory Insect Collection, and Research Associate of the Texas Memorial Museum at the University of Texas, Austin.

(15968) ALONSO-EGUIA LIS, P., 2005. Dragonflies and damselflies (Insecta: Odonata) as ecotoxicological test species for freshwater ecosystems. *SETAC Globe* 4(2): 26-27. – (Author's postal address not stated).

In freshwater ecosystems lacking fish, odon. are the top predators. As such, they are excellent candidates for ecotoxicological assessments including toxicity, bioaccumulation and biomagnification. They meet the requirements of a suitable test sp.: wide distribution, well-known ecological characteristics, large body size, limited mobility, long life, they are abundant and suitable for laboratory studies. Their sensitivity to contamination appears to be variable. Laboratory studies with some Anisoptera spp. have demonstrated a relatively high resistance to metal toxicity. Zygoptera larvae are highly sensitive to organophosphate pesticides, with sensitivity varying by instar.

(15969) *AOHADA*, Kyoto (ISSN none), No. 4 (1 Aug. 2005). (Jap., with Engl. titles). – (c/o A. Sasamoto, Ujien 108, 9-1 Gokasho-Hirano, Uji city, Kyoto, 611-0011, JA).

Sasamoto, A. & O. Tabata: Distributional records of Platycnemis foliacea sasakii in Kyoto prefecture, mainly along Katsuragawa river and Yuragawa river (pp. 2-7); – *Hisamatsu, S.*: Notes on the odonate fauna of Akahone Island, Ehime prefecture (pp. 8-11); – *Kiyoshi, T.*: A brief report on the collecting trip in Taiwan (pp. 12-15); – *Hisamatsu, S.*: A record of Odonata collected in Mt W. Tianmu, Linan City, Zhejiang province, China (pp. 16-31); – *Sasamoto, A.*: Introduction of interesting articles on Odonata, 3 (pp. 32-35); – *Sasamoto, A./ Kiyoshi, T./ Honda, T./ Hisamatsu, S./ Sato, M.*: Odonata in my university life (pp. 36-38).

(15970) *ARGIA*. The news journal of the Dragonfly Society of the Americas (ISSN 1061-8503), Vol. 17, No. 3 (1 Oct. 2005). – (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).

[Scientific articles:] *Catling, P.M., B. Kostiuk, C. Lewis & B. Bracken*: Observations on local field trips collecting in the Arnprior area: Annual Meeting of the Dragonfly Society of the Americas, 2005 (pp. 9-11); – *Catling, P.M. & B. Kostiuk*: Post-conference field trip, DSA 2005 (pp. 11-12); – *McKenzie, P.M.*: Report of first field foray of the newly formed Dragonfly Society of Missouri, 10-12 June 2005 (p. 14); – *McKenzie, P.M. & T. Vogt*: Observations of Somatochlora hineana in Missouri between 1999 and 2004 (pp. 17-21); – *Brown, G.*: Celithemis varna in New York (pp. 21-22); – *Vogt, T.E. & P.M. McKenzie*: New Zygoptera state records for Missouri: Telebasis byersi and T. salva (pp. 22-23); – *Butler, R.G., P.G. deMaynadier, M. Tomlinson, H. Rubbins, P. Long & A. Marenberg*: Northeast range extension and observations of atypical "sash" of Enallagma laterale in Maine (pp. 23-25); – *Paulson, D.*: Anax concolor, a new species for the United States (pp. 26-27); – *Bedell, P. & A. Bryan*: Orthemis ferruginea observed in Virginia (p. 27); – *Worthen, B.W.*: Odonata survey of Paris Mountain State Park and Jones Gap State Park, Greenville Co., South Carolina (pp. 27-28); – *Steele, M. & J.J. Daigle*: New Stewart county, Tennessee records (p. 28); – *Paulson, D.*: Northern bluet separated from its Eurasian relative [Enallagma cyathigerum] and assigned a new species name [E. annexum (Hagen, 1863)] (pp. 28-29); – *Matthews, J.H.*: Long-distance migration and emergence patterns in Anax junius: a review of work to date (pp. 29-31); – *Donnelly, N.*: Oceanic island in the news, or, parthenogenesis means never having to remember Valentine's Day (pp. 31-32); – *O'Brien, M.*: Hagenius brevistylus larva with attached zebra mussels, photo by P. Mayer (pp. 32-33); – *Rehn, A. & D. Furth*: Rediscovery of a lost dragonfly collection and the holotype of Tanypteryx hageni (Selys), or, Tanypteryx meets Sasquatch: the Perry Turner story (pp. 34-37); – *Paulson, D.*: Common names for two species new to the United States (pp. 38--39; Leptobasis melinogaster, Anax concolor); – *Larsen, R.*: Navajo word for dragonfly (p. 41; "*tani--l'ai*").

(15971) *ATROPOS* (ISSN 1478-8128), No. 26 (Oct. 2005). – (c/o M. Tunmore, 36 Tinker Lane, Maltham, Holmfirth, W. Yorks, HD9 4EX, UK). [Odon. articles:] *Parr, A.*: Dragonfly news update (pp. 26-27); – Odonata Records Committee update (p. 28); – *Hodge, P.*: [book review] The dragonflies of Sussex by P.A. Beldon et al. (pp. 39-40); – *Stacey, G*: An unexpected peril (pp. 46-47; Libellula depressa); – *Webb, J.*: Dragonfly conservation from the BDS (pp. 48-49); – *Tunmore, M.*: New Coenagrion mercuriale colony discovered (pp. 54-55); – *Long, R.*: A further Channel Islands record of Aeshna affinis (pp. 55-56).

(15972) BEDJANIČ, M., 2005. *Inventarizacija favne kačji pastirjev (Odonata) na območju načrtovane HE Krško ob Savi, z oceno ogroženosti in predlogi omilitvenih ukrepov.* – *[Inventarisation of dragonfly (Odonata) fauna in the area of the projected hydroelectric works Krško ob Savi, threat assessment and suggestions on the mitigating measures].* Natn. Inst. Biol., Ljubljana. 20 pp. (Slovene). – (Author: Kolodvorska 21/B, SI-2310 Slovenska Bistrica).
The survey was conducted in the Blanca-Krško area in May and June 2005. 10 spp. were evidenced, including the in Slovenia vulnerable Coenagrion ornatum, Gomphus vulgatissimus, Cordulegaster bidentata and C. heros. The local status and habitat requirements of these are outlined. The impact of the projected works would be mitigated, among others, by the construction of 2 ponds (surface 500 m^2 each, max. depth 1.5 m) and by a number of minor transverse prominences in the Sava R.

(15973) BEDJANIČ, M., 2005. *Kartiranje habitatnih tipov in vrst na področju predvidenih ureditev za potrebe projekta Ureditev oskrbe prebivalstva s pitno vodo Slovenske Istre in zalednega kraškega območja: Kačji pastirji (Odonata), končno poročilo.* – *[Habitat- and species mapping in the area of the foreseen arrangements required for the providing of drinking-water from Slovenian Istria and its karst hinterland: Dragonflies (Odonata), final report].* Natn. Inst. Biol., Ljubljana. 18 pp. (Slovene). – (Author: Kolodvorska 21/B, SI-2310 Slovenska Bistrica).
During May-Sept. 2005, 31 sites were examined and 18 spp. evidenced. These include in Slovenia the vulnerable Coenagrion scitulum, Gomphus vulgatissimus and Cordulegaster bidentata. The local status and habitat requirements of these are outlined in detail, and it is concluded that it is unlikely the projected works would seriously impair their existing populations.

(15974) BRIED, J.T., 2005. Species of adult Odonata from three natural areas in Mississippi. *J. Miss. Acad. Sci.* 50(4): 231-232. (Nature Conservancy, Eastern New York Chapter, 200 Broadway, Suite 301, Troy, NY 12180, USA).
58 spp. are listed from Noxubee National Wildlife Refuge, 51 spp. from Strawberry Plains Audubon Center, and 54 spp. from Tombigbee National Forest. Altogether, 77 spp. are recorded.

(15975) BRIED, J.T. & S. KROTZER, 2005. New species records for Mississippi: an expected dragonfly and an unexpected damselfly. *J. Miss. Acad. Sci.* 50(4): 233-234. – (First Author: Nature Conservancy, Eastern New York Chapter, 200 Broadway, Suite 301, Troy, NY 12180, USA).
The additions of Arigomphus lentulus and Lestes forficula bring the Mississippi odon. list to 132 spp. The records are stated and the circumstantial evidence described in much detail.

(15976) BURKE, J., W.R. JENKINS & K.L. BARRETT, 2005. Nymphal skins as indicators of dose response and recovery in aquatic studies. *Abstr. Book SETAC Europe 15th Annu. Meet.*, Brussels, p. 330. – (Authors' postal addresses not stated).
The assessment of the time taken for treated systems to recover is important in defining the No Ecologically Adverse Effect Concentration (NOEAEC) in field mesocosm studies. The presence of the aquatic larval forms of insects can often provide a useful basis for assessing this because unlike invertebrates with entirely aquatic life histories, insect larvae are almost continuously re-introduced into these isolated aquatic systems by egg-laying adults. Of the many insect larvae typically found in mesocosm studies, those of the Anisopt. and Zygopt. are common and the emergence of the adults can be monitored without the need for insect traps. The emergence of Aeshnidae, Libellulidae and Coenagrionidae was monitored by collecting exuviae from emergent aquatic plants and other substrates for a period of 63 days. Zygopt. were more prolific than Anisopt. although the latter appeared to be more sensitive. It was found that larval numbers in benthic colonisers could be related to the numbers of adults that emerged based on the counts of exuviae. The dose response relationship could be clearly established from exuviae

counts and results contributed to identification of the No-Effect Concentration and the NOEAEC.

(15977) CLAUSNITZER, V., 2005 [Trithemis annulata perching on Ictinogomphus ferox]. *Ent. Z.* 115(4): cover phot. with informative caption. – (Graefestr. 17, D-06110 Halle/Saale).
The phot. was taken at the Kiboko R., Kenya, in Dec. 2000.

(15978) CORDOBA-AGUILAR, A., 2005. Possible coevolution of male and female genital form and function in a calopterygid damselfly. *J. evol. Biol.* 18: 132-137. – (Inst. Ecol., UNAM, Apdo Postal 70-275, Circuito Exterior s/n, Ciudad Universitaria, MX-04510 Mexico, D.F.).
Some evolutionary changes of Calopteryx haemorrhoidalis genitalia are investigated by determing their current and past function. ♂♂ stimulate ♀♀ by aedeagal frictioning on a set of vaginal sensilla. The aedeagus is considerably variable and positively correlates with volumes of ejected sperm from the spermatheca. Interestingly, ♀♀ show a significantly reduced sensillum number compared with other family members. Here it is explored whether there existed directional selection for aedeagal width at its evolutionary onset; and whether the sensillum reduction evolved to make sperm ejection less effective. Using C. haemorrhoidalis aedeagi in ♀♀ whose spp. retained the ancestral conditions (no stimulatory ability and large sensillum numbers), Hetaerina cruentata and C. xanthostoma, the results corroborated these assumptions: variation in aedeagal width inversely correlated with sperm ejection rate while sperm ejection was higher in spp. with high sensillum numbers. A suggested coevolutionary interpretation of these results in C. haemorrhoidalis is that aedeagal width was favoured which was followed by a sensillum reduction.

(15979) *DARTER*. Newsletter of the [British] Dragonfly Recording Network (ISSN none), No. 22 (Apr. 2005). – (c/o Ms C. Daguet, English Nature, Attingham Park, Shrewsbury, SY4 4TW, UK).
Daguet, C.: [Editorial] (p. 1); – *Cham, S.*: The Dragonfly Recording Network (pp. 1-2); – *Parr, A.*: Migrant dragonflies: update for 2004 and thoughts for the future (pp. 2-3); – *Covey, S.*: Recording in Wiltshire: the last few years (pp. 3-5); – News from around the UK: Scotland (by *P. Patty*, pp. 5-6); North Wales (*A. Brandon*, p. 6); Montgomeryshire (*M. Walters*, pp. 6-7); Cumbria (*D. Clarke*, pp. 7-8); Cheshire (*D. Kitching*, p. 8); Leicestershire & Rutland (*I. Merrill*, pp. 8-9); Northamptonshire (*M. Tyrrell*, pp. 9-10); Kent (*J. Brook & G. Brook*, pp. 10-11); Sussex (*J. Luck*, p. 11); SE overview and Surrey (*N. Donnithorne*, pp. 12-13); Wiltshire (*S. Covey*, p. 13); Cornwall (*S. Jones*, pp. 13-14); Isle of Wight (*J. Cheverton*, p. 14); Somerset (*T. Waring*, p. 24); Lincolnshire (*R. Chadd & A. Hiley*, p. 14); – *List of dragonfly recorders* (p. 15-16).

(15980) DE MARCO, P., A.O. LATINI & D.C. RESENDE, 2005. Thermoregulatory constraints on behaviour patterns of a neotropical dragonfly assemblage. *Neotrop Ent.* 34(2): 155-162. (With Port. s.). – (First Author: Lab. Ecol. Quantitativa, Depto Biol. Geral, Univ. Fed. Viçosa, BR-36571-00 Viçosa, MG).
Odon. spp. are classified in terms of their thermoregulatory behaviour into flier and percher categories. Larger perchers could be more efficient thermoregulators in sunny sites and smaller perchers depend more on air temperature. In this paper, an analysis of the behavioural temporal budget of neotropical Anisoptera assemblage was performed to determine the role of body size on territorial defense and general behavioural strategies. This analysis revealed 3 groups based on time budget. The first and second group contained the spp. that remained perched for most of the activity time, but spp. of the first group differ from the second group by the larger proportion of transition flights. The third group contained spp. which were usually observed patrolling or in reproductive activities. The larger spp. spent more time in patrol and territorial defense activities, while smaller spp. remained perched. Larger dragonflies, with better thermoregulatory abilities, could spend more time in reproductive activities. The behavioural classification of fliers and perchers is considered extremely useful but could oversimplify the behavioural patterns among spp. that have a wide body size variation. It is proposed that a behavioural continuum associated with the body size variation in perchers could explain some patterns of species interactions in odon. communities.

(15981) DE MARMELS, J. & R.W. GARRISON, 2005. Review of the genus Leptagrion in Venezuela with new synonymies and descriptions of a new genus, Bromeliagrion, and a new species, B. rehni (Zygoptera: Coenagrionidae). *Can. Ent.* 137(3): 257-

-273. – (Second Author: California Dept Food & Agric., 3294 Meadowview Rd, Sacramento, CA 95832-1448, USA).
Type material of poorly known taxa currently placed under the genera Leptagrion Selys and Telagrion Selys is reviewed, illustrated and correctly associated with currently known specimens in collections. The following changes are made: Leptagrion beebeanum Calvert and L. fernandezianum Rácenis are placed and keyed in a new genus, Bromeliagrion De Marmels gen. n.; Bromeliagrion rehni Garrison sp. n. is described from Ecuador. The following synonymies are proposed: Leptagrion auriceps St. Quentin is a junior synonym of L. macrurum (Burmeister); L. autazensis Sjöstedt is a junior synonym of Aeolagrion flammeum (Selys); Leptagrion? rufum Selys is a junior synonym of Anisagrion inornatum (Selys); and Leptobasis tenax St. Quentin is a junior synonym of Telagrion longum Selys.

(15982) *DIGEST OF JAPANESE ODONATOLOGICAL SHORT COMMUNICATIONS*, No. 19 (Dec. 2005). – Compiled, translated and produced by K. Ishizawa (1644-15, Yamaguchi, Tokorozawa, Saitama, 359-1145, JA).
Ishizawa, N.: Morphological differences in a dragonfly, Sympetrum frequens Selys, with relation to the centre of gravity (pp. 1-4); – *Arai, Y.*: Ecology of Sympetrum darwinianum Selys, with special reference to the reproductive behaviour (pp. 5-6); – Hatching rate of Sympecma p. paedisca (Eversmann) (p. 6).

(15983) DIJKSTRA, K.-D.B., J. VAN TOL, J. LEGRAND & G. THEISCHINGER, 2005. Tramea Hagen, 1861 (Insecta, Odonata): proposed conservation. *Bull. zool. Nom.* 62(2): 68-71. – (Second Author: Naturalis, P.O. Box 9517, NL-2300 RA Leiden).
The purpose of this application, under Article 23.9.3 of the Code, is to conserve the generic name Tramea Hagen, 181 for a group of common and widespread dragonflies by suppression of the senior objective synonym Trapezostigma Hagen, 1849. In addition, it is proposed that all previous fixations of type species for the nominal genus Tramea Hagen, 1851 before that by Kirby (1889) of Libellula carolina Linnaeus, 1763 be set aside.

(15984) DOLNÝ, A. & P. PAVLIK, 2005. Fauna of dragonflies (Insecta: Odonata) in the area of a limestone quarry Kotouč in Stramberk (Czech Republic, Podbeskydy upland). *Čas. slez. Muz. Opava* (A) 54(1): 15-24. (Czech, with Engl. s.). – (First Author: KBE, Ostrava Univ., Chittussiho 10, CZ-710-00 Slezská Ostrava).
The fauna is described and analysed; the quarry operates since 1881. Out of the 29 recorded spp., 20 spp. are certainly autochthonous, but the absence of some thermophylous spp. is surprising. The Orthetrum brunneum population at this Moravian site is among the largest in the Czech Republic, and it is nationally for the first time the breeding of this sp. was documented.

(15985) DuBOIS, B., 2005. *Damselflies of the North Woods.* Kollath-Stensaas, Duluth/MN. viii+132 pp. Softcover (11.2×21.0 cm). ISBN 0-9673793--7-7. Price: US $ 18.95 / € 20.15 net. – (Publishers: 394 Lake Ave South, Suite 406, Duluth, MN 55802, USA).
This is the companion to the Anisoptera volume (by K. Mead), described in *OA* 15220. It covers the same area, has the same lay-out and the information is organised identically. The field guide covers all 46 Zygoptera spp. presently known from the North Woods. – The 2 vols are easy-to-use identification tools for the regional fauna, providing also much general information on odon. biology and, above all, very useful notes on the biology of the regional spp.

(15986) DYATLOVA, E.S., 2005. Novye svedeniya o faune strekoz (Odonata) goroda Odessy i ee okrestnostey. – [New data on the Odonata of Odessa and its environs]. *Zagal'na i prikladna entomologiya v Ukraini* (Tezi nauk. Konf. Pam'yati V.G. Dolina), Lwow, pp. 79-81. (Russ.). – (Frantsuzkij Bul'var 37, kv. 3, UKR-65044 Odessa).
The records (2003-2004) are presented for 33 spp. and the information on 4 other spp., known only from the literature, is added. Lestes dryas is for the first time recorded from the province of Odessa, whereas Coenagrion scitulum, Orthetrum coerulescens anceps and Sympetrum pedemontanum are new to the fauna of the SW Ukraine.

(15987) DYATLOVA, E.S., 2005. Novye svedeniya o faune strekoz (Insecta: Odonata) Pridunayskogo regiona. – [New data on the odonate fauna of the Lower Danube region]. *Sovremennye problemy zoologii i ekologii* (Mater. mezhdunar. Konf. 140-let.

Osnov. odesskogo Univ.), Odessa, pp. 81-84. (Russ.). – (Frantsuzkij Bul'var 37, kv. 3, UKR-65044 Odessa).
The records (1996-2004) are presented for 24 spp. Of particular interest is the Calopteryx splendens ancilla population of the "Islands of Ismail" Landscape Park, with "normal" and androchromous ♀♀; – the Ukraine.

(15988) EMMS, C. & L.K. BARNETT, 2005. *Gambian biodiversity: a provisional checklist of all species recorded within the Gambia, West Africa.* Pt 1: *Introduction, Bacteria, Protista and Invertebrates.* Makasutu Wildlife Trust, Serrekunda. 35 pp. – (Publishers: P.O. Box 2164, Serrekunda, Gambia).
This is the 3rd version, compiled in May 2005. A checklist of 78 odon. spp. appears on pp. 12-13. The bibliography is included in pt 4.

(15989) *ERJAVECIA.* Bulletin of the Slovene Odonatological Society (ISSN 1408-8185), No. 20 (31 Oct. 2005). (Slovene). – (c/o M. Bedjanič, Kolodvorska 21/B, SI-2310 Slovenska Bistrica).
Bedjanič, M.: Editorial, at the 10th anniversary of the appearance of the journal (p. 2); – *Kiauta, B.*: Professor Dr Ciril Ažman, insect collector from Novo mesto, 1881-1952 (pp. 1, 3-7); – *Pivko-Kneževič, A.*: Erythromma lindenii in Haloze (pp. 8-10); – *Bedjanič, M.*: First confirmation of Ophiogomphus cecilia breeding in the Sava river (pp. 10-12); – Two additional notes on mountain migrations of Ophiogomphus cecilia in Slovenia (pp. 13-14); – *Klenovšek, D.*: Lestes barbarus also in Spodnje Posavje (pp. 14-15); – *Kocmur, H.*: A day with the odonatologist Sašo Weldt (pp. 15-19); – [*Various notices and announcements*] (pp. 19-22; texts by *C.C. Lay* and *K. Inoue* in Engl.); – *Bedjanič, M.*: Additions to the odonatological bibliography of Slovenia, 20 (pp. 22-24); – Odonatological bibliography of Slovenia, 1685-2005 (pp. 24-60; ca 600 titles).

(15990) EYRE, M.D., J.C. WOODWARD & M.L. LUFF, 2005. Expanding northern ranges of aquatic invertebrate species: a possible effect of climate change? *Br. J. Ent. nat. Hist.* 18(3): 219-223. – (Inst. Res. Envir. & Sustainability, Devonshire Bldg, Univ., Newcastle upon Tyne, NE1 7RU, UK).
Survey work during 2002-2004 in NE England has generated a number of distribution records indicating expanding northern British ranges and including Aeshna grandis, Anax imperator and Brachytron pratense. Aquatic habitat availability has increased in NE England, mainly as a result of land reclamation of mining operations, but the observed changes of northern ranges are likely to be related to temperature rise, in line with other spp. such as butterflies. The records are presented and the trends discussed.

(15991) GAPUD, V.P., 2005. The status of insect biodiversity in the Philippines. [Seminar presented at the Department of Entomology, Central Mindanao University, Musuan, Bukidnon, 26 November 2004]. *Samut-sari* [Newsl. Philippines-Netherlands Biodiv. Res. Progr. Develop. Mindanao] 4(1): 2-5. – (Dept Ent., Univ. Philippines, Los Baños, Philippines).
The initial datbases for the Philippine arthropods were prepared, that for the odon. was contributed by the Author. The current inventory of the Philippine insects covers ca 21.000 spp., Ephemeroptera and Odon. make up for 1.5% of these. Of particular interest are the Zygoptera, with 186 spp., of which 85.5% are endemic, inhabiting mostly the forested streams. Many spp. in the collections are still undescribed, and the discovery of many others is expected.

(15992) GEISTER, I., 2005. Školjčna sipina v zalivu Polje. – [The shell sands in the Gulf of Polje]. *Gea* 15(7): 14-20. (Slovene). – (Kocjančiči18, SI-6276 Pobegi).
Aeshna affinis, A. mixta, Anaciaeschna isosceles and Sympetrum fonscolombei are mentioned (vernacular names only) from a freshwater pond behind the dune in the Rižana R. estuary, Istria, Slovenia.

(15993) *GOMPHUS.* Mededelingsblad van de belgische Libellenonderzoekers – Bulletin de liaison des odonatologues belges (ISSN 0772-4691), Vol. 20, No. 1 (dated Dec. 2004, mailed 11 Aug. 2005). (Dutch & Fr., with Engl. s's). – (c/o G. de Knijf, Matrouwstraat 10, B-9661 Brakel-Parike).
Tailly, M.: Editorial (pp. 1-2); – *Lambrechts, J.*: Dragonfly fauna of the Houterenberg-Pinnekeswijer region (Tessenderlo, West-Limburg) (pp. 3-15); – *Van de Meutter, F.*: Northern expansion of Orthetrum brunneum in Flanders (pp. 16-20); – *De Knijf, G. & M. Tailly*: Oviposition in Aeshna cyanea: some remarkable observations (pp. 21-26); – *Loos, G. / Tailly, M.*: Compte rendu d'excursions (pp. 27-31); – *Tailly, M.*: [book review] Dragonflies of

Europe (revised edn), by R.R. Askew (pp. 32-33); – *Excursions 2005* (pp. 34-36).

(15994) GRIMALDI, D. & M.S. ENGEL, 2005. *Evolution of the insects*. Cambridge Univ. Press, Cambridge-New York-Melbourne-Madrid-Cape Town-Singapore-São Paulo. xvi+755 pp. Hardcover (23.3×29.8 cm; weight 3 kg). ISBN 0-521-82149-5. Price: € 74.98 net. – (Publishers: 40 West 20th Str., New York, NY 10011-4211, USA).
A monumental work and a landmark contribution to the science of entomology and evolutionary biology, it is certainly to remain a primary reference work for years to come. The Odonatoptera (orders Geroptera, Protodonata and Odonata) are dealt with on pp. 175-187. The higher level classification adopted is basically that of A.C. Rehn (*OA* 14792). The work is very legible and its value is additionally enhanced by over 900 photo- and electron micrographs, field photographs, drawings and diagrams, many in full colour, virtually all original. – The book is a must for the professionals and it is highly recommended to the layman, working in any field of entomology. – For similar works, dealing with fossil taxa only, see *OA* 8942 and 14399.

(15995) GROENENDIJK, D., 2005. [A note on expansion of Pyrrhosoma nymphula in the Netherlands and on an unusual prey of Anax imperator]. *Vlinders* 20(3): 32. (Dutch). – (De Vlinderstichting, P.O. Box 506, NL-6700 AM Wageningen).
A few yr ago, P. nymphula expanded throughout the continental Noord-Holland prov., on 25-V-2005 it was seen already at Burg in the Northsea island of Texel. – On the same date, Coenagrion lunulatum was recorded from the island of Terschelling. – A phot. is provided of an A. imperator, consuming a Lasiocampa quercus moth.

(15996) GUSZTAK, R.W., R.A. MacARTHUR & K.I. CAMPBELL, 2005. Bioenergetics and thermal physiology of American water shrews (Sorex palustris). *J. comp. Physiol.* (B) 175: 87-95. – (Dept Zool., Univ. Manitoba, Winnipeg, MB, R3T 2N2, CA).
Weighing 12-14 g, S. palustris is the world's smallest mammalian diver. The individuals used in this study were trapped in Manitoba, Canada. In captivity their diet was supplemented also with Anax spp. and Libellula spp. larvae.

(15997) HADRYS, H., W. SCHROTH, B. SCHIERWATER, B. STREIT & O.M. FINCKE, 2005. Tree hole odonates as environmental monitors: non-invasive isolation of polymorphic microsatellites from the neotropical damselfly Megaloprepus caerulatus. *Conserv. Genet.* 6: 481-483. – (First Author: ITZ, Ecol. & Evol., TiHo Hannover, Bünteweg 17 d, D-30559 Hannover).
Because of their complex mating behaviour and life cycle (alternating aquatic and terrestrial stages) odon. provide important model systems for environmental monitoring, evolutionary ecology, and conservation genetics. Many odon. spp. are endangered and call for the use of non-invasive molecular studies. In M. caerulatus polymorphic microsatellite loci were identified by means of the randomly amplified microsatellite technique (RAMS; A. Ender et al., 1996, *Mol. Ecol.* 5: 437-441). Using the DNA from each a single leg of 3 unrelated individuals 63 RAPD primers were screened for small size banding patterns. A total of 95 RAPD profiles was hybridized with digoxigenin labelled di- and trinucleotide repeats (GAn, GTn, CAn and AATn) and 36 RAPD fragments harbouring microsatellite motifs were isolated. Cloning and sequencing of positive fragments revealed 5 polymorphic microsatellite loci. Since M. caerulatus is a viable bio-indicator for primary rainforests the microsatellite system can be used to study the effects of forest fragmentation on population viability.

(15998) HOESS, R., 2005. Libellen. *Berner Naturschutz* 7: 1-8. – (Normannenstr. 35, CH-3018 Bern).
The conservation, regional occurrence and threats to the odon. fauna, as well as the current status and habitat requirements of 59 spp. of canton Bern, Switzerland are outlined.

(15999) HUMPESCH, U. & C. FESL, 2005. Biodiversity of macrozoobenthos in a large river, the Austrian Danube, including quantitative studies in a free-flowing stretch below Vienna: a short review. *Freshw. Forum* 24: 3-23. – (First Author: Limnol. Inst., Austrian Acad. Sci., Mondseestr. 9, A-5310 Mondsee).
The Danube is ca 2850 km in length and is the second largest river in Europe. It rises in the Black Forest of Germany and discharges into the Black Sea (Romania and the Ukraine). The catchment ca 805.300 km^2) includes 12 other countries, viz. Swit-

zerland, Austria, Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Bosnia/Herzegovina, Serbia & Montenegro, Albania, Bulgaria and Moldova. – The Austrian part falls 156 m in altitude over its 351 km length and, since the early 1950s, the river has been developed into a power-generating waterway, so that the continuity of the river is now interrupted by 10 impounded areas. The barrages built across the river include large locks which allow shipping to pass. Only 2 stretches of the original free-flowing river are left: the Wachau region W of Vienna and the region downstream from the impoundment at Vienna. – As to the odon. in the Austrian section (60 spp.), the paper only provides statistical data on the numbers of spp. occurring in different types of habitats: free-flowing sections (main river: 1 sp., backwater: 30 spp.), impounded sections (impoundment: 7 spp., backwaters: 58 spp.).

(16000) INOUE, K. & K. TANI, 2005. *Tombo no subete – All about dragonflies*. Tombow, Osaka. ii+168 pp. Softcover (25.5×18.0 cm). ISBN 4-88716--112-3, 2nd revised edn. Price: ¥ 3600.- net. (Jap., with taxonomic nomenclature, Engl. title, chapter titles & fig. captions). – (First Author: 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545-0004, JA).
The first edn (1999) is described in *OA* 12676. Here, the Mnais nomenclature is adopted after F. Hayashi et al. (2004, *Odonatologica* 33: 399-412), the former Cercion is replaced by Paracercion, and P. sexlineatum by P. melanotum. – Currently the book is an absolute odonatol. bestseller in Japan. The first revised edn was reprinted 4 times.

(16001) INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE, 2005. [Opinion 2037 (cases 3120 and 3120a)]: Liochelidae Fet & Bechly, 2001 (1879) (Scorpiones): adopted as a valid substitute name for Ischnuridae Simon, 1879 in order to remove homonymy with Ischnurinae Fraser, 1957 (Insecta, Odonata). *Bull. zool. Nom.* 60(2): 159-161.
(For the original application, see *OA* 14192). – [Verbatim abstract:] The Commission has ruled that the scorpion family name Liochelidae Fet & Bechly, 2001 (1879) is to have precedence over Ischnuridae Simon, 1879, which is a homonym of the widely used damselfly name Ischnurinae Fraser, 1957 (Odonata). The type genus of Liochelidae is Liocheles Sundevall, 1833, which is in wide use as the valid senior subjective synonym of the long abandoned name Ischnurus C.L. Koch, 1837 (the type genus of Ischnuridae Simon, 1879). Ischnurinae Fraser, 1957 is not to be rejected despite being a junior homonym of Ischnuridae Simon, 1879.

(16002) IVINSKIS, P. & J. RIMSAITE, 2005. Baltic seashore as a unique habitat for insects. *Acta zool. lituan.* 15(2): 115-118. (With Lithuan. s.). – (Inst. Ecol., Vilnius Univ., Akademijos 2, LT-08412 Vilnius-21).
The Baltic seashore is an important insect biodiversity region in Lithuania. Systematic inventarisation in the seashore habitats in the Curonian Spit and in the Klaipėda-Šventoji area (1974-2004) yielded over 2000 spp. The legally protected Aeshna viridis, Leucorrhinia albifrons, L. caudalis and L. pectoralis are listed here.

(16003) LIESS, M. & P.C. VON DER OHE, 2005. Analyzing effects of pesticides on invertebrate communities in streams. *Envir. Toxicol. Chem.* 24(4): 954-965. – (UFZ-Cent. Envir. Res., Permoserstr. 15, D-04318 Leipzig).
The study was conducted at 20 sites, located on first orders streams in the Braunschweig area, Germany. The sensitivity values are stated for 9 odon. fam. and for Platycnemis pennipes, Aeshna cyanea and Cordulegaster boltonii.

(16004) MACHADO, A.B.M., 2005. Studies on neotropical Protoneuridae. 18. Epipleoneura janirae sp. n. from the Amazonian region of Brazil (Odonata: Protoneuridae). *Lundiana* 6(1): 47-48. – (Depto Zool., Inst. Cien. Biol., Univ. Fed. Minas Gerais, Caixa Postal 486, BR-31270-901 Belo Horizonte, M.G.).
The new sp. is described and illustrated. Holotype ♂ (in cop. with allotype ♀): Pará, Belterra, II-1957; deposited in Author's collection. The new sp. is similar to E. uncinata De Marmels, and differs from the known congeners by its predominantly pale thoracic colour.

(16005) [MACHADO, A.B.M.], 2005. *Lundiana*. International journal of biodiversity (ISSN 1676--6180), Vol. 6 (Suppl.), *Special issue commemorating the 70th anniversary of Dr Angelo B.M. Machado* (Nov. 2005). 112 pp., cover with portrait. Editor--in-Chief: A.L. de Melo. (Engl. & Port., with Engl. s's).
There are 2 Editorials, viz. *de Melo, A.L.*: A citizen

and scientist or a scientist citizen (p. 3); – and *Silveira, F.A.*: Honored to honour (p. 3); – followed by richly illustrated biography and appreciation of A.B.M. Machado's work, *Mitre, M.*: Professor Angelo Machado: the remarkable deeds of a polyvalent mind (pp. 5-10). – 14 papers in the fields of ecology, microbiology and zoology, authored by 33 workers, constitute the bulk of the issue. The following of these are in the field of odonatology: *De Marco, P. & D.M. Vianna*: Distribution of Odonata sampling in Brazil: basis for choosing priority areas for faunistic inventories (pp. 13-26); and – *Costa, J.M.*: Chalcopteryx machadoi sp. n. from northern Brazil (Zygoptera, Polythoridae) with a key to the species of the genus (pp. 37-39).

(16006) MAES, D., D. BAUWENS, L. DE BRUYN, A. ANSELIN, G. VERMEERSCH, W. VAN LANDUIT, G. DE KNIJF & M. GILBERT, 2005. Species richness coincidence: conservation strategies based on predictive modelling. *Biodiv. Conserv.* 14: 1345-1364. – (First Author: Inst. Nat. Conserv., Kliniekstraat 25, B-1070 Brussels).
Species richness is modelled of Odon., Rhopalocera, herpetofauna, breeding birds and plants in Flanders, Belgium, using various environmental characteristics as predictor variables (area of different land use types, biotope diversity, topographic and climatic features). Forward stepwise multiple regression was applied to build the models, using a subset of well-surveyed squares. A separate set of equally well-surveyed squares was used to test the predictions of the models. The coincidence of geographic areas with high predicted species richness was remarkably high among the 4 faunal groups. Consequently, the 4 investigated faunal groups can be used as relatively good indicator taxa for one another in Flanders. The applicability of predictive modelling in nature conservation policy is discussed.

(16007) MIKOLAJEWSKI, D.J., T. BRODIN, F. JOHANSSON & G. JOOP, 2005. Phenotypic plasticity in gender specific life-history: effects of food availability and predation. *Oikos* 110(1): 91-100. – (First Author: Zool. Inst., Tech. Univ. Braunschweig, Spielmann Str. 7, D-38106 Braunschweig).
If environmental conditions vary, plasticity in life-history traits is predicted. A recent model indicates that ♂♂ and ♀♀ should differ in life-history traits, because sexes differ in optimal attributes depending on species ecology. In the present study the impact was tested of 2 biotic factors in combination (presence/absence of predators and low/high food level) on sex specific life-history traits in Coenagrion puella. Results show that predator presence and low food density decreased activity in both sexes. Additionally, individuals with less food grew more slowly, emerged later, remained smaller and had a higher mortality. At low food densities, however, and in contrast to previous investigations, individuals from treatments with predator presence were the same size or larger than individuals without predators. Sex had a strong impact on larval activity and life-history traits and sexes differed in development. ♀♀ were less active and took longer to complete development, but emerged at a larger size, weight and fat content. The present work highlights the importance of sex specific approaches in life-history research.

(16008) NEL, A., J.F. PETRULEVIČIUS & X. MARTINEZ-DELCLÒS, 2005. New Mesozoic Protomyrmeleontidae (Insecta: Odonatoptera: Archizygoptera) from Asia with a new phylogenetic analysis. *J. syst. Palaeontol.* 3(2): 187-201. – (First Author: Lab. Ent., Mus. Natn. Hist. Nat., 45 rue Buffon, F-75005 Paris).
The following new taxa are described: Ferganagrion kirghiziensis gen. n., sp. n. (later Middle or earlier Late Triassic of Madygen Valley, Batken distr., Kirghizia), Paraobotritagrion gen. n. (for Obotritagrion tenuiformis Zessin, 1991), Mongolagrion shartegensis gen. n., sp. n. (Late Jurassic-Early Cretaceous of Teg Ula Mt, Gobi-Altai, Mongolia), and 4 Protomyrmeleon spp. (all from Middle-Late Jurassic of Karatau, Kazakhstan), viz. P. grandis sp. n., P. karatauensis sp. n., P. kazakhstanensis sp. n., and P. pumilio sp. n. – The wing venations of protomyrmeleontid genera are homologised and the high morphological disparity in this fam. suggests that the Protomyrmeleontidae had very different modes of flight and, consequently, occupied a wide range of palaeoenvironments. A new phylogenetic analysis suggests that the fossil record is too scarce and incomplete to solve the phylogeny of the fam. In particular, the current division of Protomyrmeleontidae in Triassagrioninae and Protomyrmeleontinae is only weakly supported.

(16009) NUGEGODA, D., J. KEAMS, S. MARSHALL & V. PETTIGROVE, 2005. Monitoring of trace metals in urban streams and wetlands us-

ing mosquito fish and aquatic insects. *Abstr. book SETAC Europe 15th Annu. Meet.*, Brussels, p. 187. – (Authors' postal addresses not stated).
10 wetlands within the Greater Melbourne Area, Australia that display a gradient in trace metal pollution were sampled. Ischnura spp., Aeshna brevistyla and Hemicordulia tau were among the investigated insect spp., as potential biomonitors of metal pollution. Larvae were collected from clean and metal contaminated sites and analysed for body burdens of zinc, copper and lead. Sediment from the sites was also analysed. Bioconcentration factors for the 3 metals by odon. was significantly different to each other. The bioavailability of trace metals in these urban sediments was confirmed by exposing the oligochaete, Lumbriculus variegatus, to the sediments from respective clean and metal contaminated sites. Bioconcentration factors were highest in oligochaetes, followed by odon., and least in Gambusia holbrooki.

(16010) PETRULEVIČIUS, J.F. & A. NEL, 2005. Austroperilestidae, a new family of damselflies from Early Eocene of Argentina (Insecta: Odonata): phylogenetic relationships within Odonata. *J. Paleontol.* 79(4): 658-662. – (Lab. Ent., Mus. Natn. Hist. Nat., 45 rue Buffon, F-75005 Paris).
The new fam. is introduced for Austroperilestes hunco gen. n., sp. n. (Lower Eocene of Laguna del Hunco, Chubut prov., Patagonia). Its phylogenetic relationships within the Zygoptera are discussed. The new fam. seems to be related to Perilestidae, with a neotropical and afrotropical recent distribution.

(16011) POGAČNIK, J., 2005. Kačji pastirji. – [Dragonflies]. *Ciciban cicido* 8(Oct.): 20-31. (Slovene). – (Issue available, at SIT 695.- net, from the publishers: Mladinska knjiga Založba, Informacijsko-oskrbovalno središče, Slovenska 29, SI-1536 Ljubljana).
A brief outline of 7 topics for conversation on dragonflies with children aged 2 yr or older. 7 appropriate pictures are included.

(16012) ROBB, T. & M.R. FORBES, 2005. Success of ectoparasites: how important is timing of host contact? *Biol. Lett.* 1(2): 118-120. – (Dept Biol., 209 Nesbitt Bldg, Clemson Univ., 1125 Colonel By Dr., Ottawa, ON, K1S 5B6, CA).
Hosts often differ in their degree of parasitism and their expression of resistance. Yet very little is known about how the availability (and allocation) of resources to parasites at pre-infective stages influences their success in initiating parasitism, or in inducing and succumbing to resistance from hosts. A Zygoptera-mite association was studied to address how experimental variation in the age of first contact with hosts (timing) influenced subsequent parasite fitness. It is demonstrated that timing influenced the ability of larval mites to make the transition to parasitism, but was not associated with measures of physiological resistance by hosts. Timing presumably relates to the availability of resources remaining for individuals to exploit their hosts. More research is needed on the importance of such factors, from variation in host resistance and parasite success and, ultimately, to the numbers and distributions of parasites on hosts.

(16013) SAITO, Y. & M. OWADA, 2005. Dragonflies (Odonata) of the Tokiwamatsu Imperial Villa, Tokyo, central Japan. *Mem. natn. Sci. Mus., Tokyo* 39: 431-438. (Jap., with Engl. s.). – (Second Author: Dept Zool., Natn. Sci. Mus., Hyakunincho 3-23-1, Shinjuku, Tokyo, 169-0073, JA).
The Imperial Villa is located in central Tokyo and has a garden of ca 2 ha. In the garden, there is a rather small, well kept pond, where 18 spp. were recorded during 2002-2004. Among these, Ceriagrion nipponicum is rare in Tokyo, and the occurrence of Anaciaeschna martini, Anax nigrofasciatus and Rhyothemis fuliginosa is emphasized. – For the odon. inventories of other Imperial properties in Tokyo, see *OA* 13832 and 16014.

(16014) SAITO, Y., M. OWADA & S.-i. KATO, 2005. Dragonflies (Odonata) of the Akasaka Imperial Gardens, Tokyo, central Japan. *Mem. natn. Sci. Mus., Tokyo* 39: 419-430. (Jap., with Engl. s.). – (First Author: Hirai 5-26-12, Edogawa, Tokyo, 132-0035, JA).
The Gardens (surface ca 51 ha) are located in central Tokyo. 24 spp. were recorded during 2002-2004. – For the odon. inventories of other Imperial properties in Tokyo, see *OA* 13832 and 16013.

(16015) WHILES, M.R. & B.S. GOLDOWITZ, 2005. Macroinvertebrate communities in central Platte river wetlands: patterns across a hydrologic gradient. *Wetlands* 25(2): 462-472. – (First Author: Dept Zool., Southern Illinois Univ., Carbondale,

IL 62901-6501, USA).
Macroinvertebrate abundance, biomass, community structure and organic matter resources were quantified in 4 natural wetlands in the central Platte R., Nebraska, USA that represented a gradient from ephemeral to permanent flooding. For odon., the information is presented orderwise. Patterns of abundance, biomass and diversity, along with seasonal patterns, suggest that, at a landscape level, a diversity of wetland habitats with different hydrologic regimes will maximize abundance and diversity of freshwater macroinvertebrate communities in this region.

(16016) *WILLIAMSONIA*. Newsletter of the Michigan Odonata Survey (ISSN none), Vol. 9, No. 2/3 (? Sept. 2005). – (c/o Dr M.F. O'Brien, Insect Div., Mus. Zool., Univ. Michigan, Ann Arbor, MI 48109, USA).
O'Brien, M.: The 4th Hine's Emerald Dragonfly Workshop (pp. 1-4); – New Enallagma anna records (p. 4); – The value of vouchers, and a correction of a Wayne county record (p. 5); – *Anonymous:* [book review] Damselflies of the North Woods, by B. DuBois (p. 6); – *Ross, S.*: Index to the Williamsonia, volumes 1-8 (pp. 7-17).

(16017) [WILSON, K.D.P.] REELS, G., 2005. [Book review] Field guide to the dragonflies of Hong Kong, by K.D.P. Wilson. *Porcupine* 32: 20-21. – (K.D.P. Wilson, 18 Chatsworth Rd, Brighton, BN1 5DB, UK).
A review of the volume described in *OA* 15398. Some critical notes on the books listed in *OA* 10829 and 14554 are also included.

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(16018) DYATLOVA, E.S., 2006. The Odonata of southwestern Ukraine. *Opusc. zool. flumin.* 221: 1--15. – (Dept Zool., Fac. Biol., Odessa Natn. Univ., Dvoryanskaya 2, UKR-65026 Odessa).
Based on literature and on the 2002-2005 surveys, 54 spp. are listed from 43 localities. New records are provided for 43 spp. Coenagrion scitulum and Sympetrum pedemontanum are new to the region. The occurrence of Calopteryx splendens ancilla on the lower Danube (cf. A.N. Bartenev, 1912, *Ezhegod. zool. Muz. imp. Akad. Nauk* 17: 281-288) is confirmed. Erythromma lindenii, hitherto known from the lower Danube, is recorded also from the Dnieper and Dniester basins. The SW Ukrainian populations of Orthetrum coerulescens are referable to O. c. anceps.

(16019) [MAUFFRAY, B.] BLOMBERG, M., 2006. Mr P[rofessional] P[eople] I[n] R[eal Estate]. *Gainesville Sun*, issue of 9 Jan., 3 pp. – (c/o B. Mauffray, IORI, P.O. Box 147100, Gainesville, FL 32614-7100, USA).
A local daily's article on the picturesque career and manyfold interests of B. Mauffray, currently Managing Director of the International Odonata Research Institute (IORI), at Gainesville, FL, USA. After graduating in entomology from Louisiana St. University (1969), he worked with the St Bernard Parish (Chalmette, E of New Orleans) Mosquito Control Board and was a talent agent, booking bands for parties in New Orleans. Moving to Gainesville, he was a Graduate Assistant in the Entomology Department and became a collaborator of the IORI, under the late Prof. Dr M.J. Westfall, but earned his living as a professional real estate realtor. He is founder of PPIR and of the Jewish Professionals, another social networking group of lawyers, doctors, educators etc. of Jewish extraction.

(16020) *ODONATOLOGICAL ABSTRACT SERVICE* (ISSN 1438-0269), No. 17 (Jan. 2006), 50 pp. Compiled by M. Lindeboom (Landhausstr. 10, D--72074 Tübingen), K. Reinhardt (Dept Anim. & Plant Sci., Univ. Sheffield, Sheffield, S10 2TN, UK) & M. Schorr (Schulstr. 78, D-54314 Zerf).
Abstracts Nos 5006-5335, of the works published 1997-2005.

(16021) SAGA TOMBO KENKYUKAI, [Publisher], 2006. *Kingdom of dragonfly, Saga.* Saga Tombo Kenkyukai, Saga. (Jap., with Engl. title & taxonomic nomenclature). – (c/o Prof. Dr K. Higashi, Chifu 3062-1, Kinryu-machi, Saga, 849-0905, JA).
An attractive monthly wall calendar, with a dragonfly photograph for each month. 18 photographs are added. All are excellent, and many of them represent valuable documents on odon. behaviour.