

ODONATOLOGICAL ABSTRACTS

2001

- (15179) CATLING, P.M., 2001. Decline of *Gomphus f. fraternus* (Odonata: Gomphidae) in Lake Erie. *Great Lakes Ent.* 34(1): 1-7. — (2326 Scrivens Dr., R.R. 3, Metcalfe, ON, K0A 2P0, CA).
Collections and literature reports indicate that the sp. was abundant on the shoreline prior to 1960. The 1999 and 2000 surveys did not result in any observations. It is concluded that the sp. has declined substantially and is possibly extirpated from the lake. The decline appears to have occurred between 1950 and 1960, and thus approximates the mid-1950 decline of burrowing mayflies, which has been associated with warm weather oxygen depletion and pollution. It is likely that the causes of *G. fraternus* decline include climatic warming, pollution, changes to the shoreline, other effects of shoreline development and introduced spp.
- (15180) DAS, A., 2001. A catalogue of new taxa described by the scientists of the Zoological Survey of India during 1916-1991. *Occ. Pap. zool. Surv. India* 208: viii+530 pp. ISBN 81-85874-93-X. Price: US \$ 50.- net. — (Zool. Surv. India, 13th Floor, Nizam Palace, Calcutta-700020, India).
Agriocnemis corbeti Kumar & Prasad, 1978; *Calicnemia mukherjeei* Lahiri, 1976; *Coeliccia prakritii* Lahiri, 1985; *C. sarbottama* Lahiri, 1987; *Megalestes lieftincki* Lahiri, 1979; *M. raychaudhuri* Lahiri, 1987; *Lestes garoensis* Lahiri, 1987; *Orolestes durga* Lahiri, 1987; *Anisopleura lieftincki* Prasad & Ghosh, 1984; *Gomphidia ganeshi* Chottani et al., 1983; *Ictinogomphus distinctus* Raja Ram, 1984; *I. kishori* Raja Ram, 1984; *Nihonogomphus indicus* Lahiri, 1987; *Onychogomphus meghalayanus* Lahiri, 1987; *Gynacantha rannohani* Mitra & Lahiri, 1975; *Oligoaeschna andamani* Chottami et al., 1983; *Tholymis paratillarga* Singh & Prasad, 1980; and *Zygonyx iris* intermedia Lahiri, 1987 are catalogued (pp. 133-135), with type locality data and bibliographic references.
- (15181) FIGUEIREDO, D. & A. GOUVEIA, 2001. Inventariação da taxocenose Odonata na Bacia do Rio Guadiana. *Bolm Soc. port. Ent.* (Suppl.) 6: 287-292. (Port., with Engl. s.). — (Cent. Ent. Appl., Univ. Évora, Aptdo 94, PT-7001 Évora Codex).
The 1996-1997 survey at 11 sites in Guadiana basin, Portugal yielded 24 spp. These are listed here locality-wise. *Orthetrum trinacria* is new to the fauna of Portugal.
- (15182) GLOTZHOBER, R.C. & E. CHAPMAN, 2001. Second location for two rare Odonata in Ohio, *Nannothemis bella* and *Ladona julia* (Odonata: Libellulidae), discovered at Singer Lake Bog, Summit county, Ohio. *Great Lakes Ent.* 34(2): 63-66. — (Second Author: 5251 Verner Rd, Kent, OH 44240, USA).
Previously these 2 spp. were known in Ohio from only one extant population each. During 2000, populations of each were found in close proximity to each other at Singer Lake, NE Ohio. *Dorocordulia libera* also occurs at this location.
- (15183) NARAOKA, H., 2001. [Mass emergence of *Rhyothemis fuliginosa* in Aomori prefecture]. *Celastrina* 36: 49-52. (Jap.). — (36-71, Motoizumi, Fukunoda, Itayanagi, Kita-gun, Aomori, 038-3661, JA).
[Abstract not available.]
- (15184) O'BRIEN, M.F., 2001. [Book review] *Dragonflies of Indiana*, by J.R. Curry. *Great Lakes Ent.* 34(1): 133-134. — (Insect Div., Mus. Zool., Univ. Michigan, Ann Arbor, MI 48109-1079, USA).
A comprehensive and very appreciative review of the work described in OA 13940. The reviewer regrets the massive Indiana collections in the UMMZ were not ex-

amined and he is suspecting they may contain additional records.

- (15185) TOTH, S., 2001. Distribution of the Large Red Damselfly (*Pyrrhosoma nymphula interposita* Varga, 1968) in the Bakony area (Insecta: Odonata). *Fol. Mus. hist.-nat. bakonyiensis* 18: 25-94. (Hung., with Engl. s.). — (Széchenyi u., HU-8420 Zirc).

Currently, the sp. is known from 304 sites in Hungary, 141 of these in the Bakony Mts. All the latter are listed and described. The other subjects treated in this monograph are: habitat classification based on water typology, larval habitat choice, larval and adult phenology etc.

2002

- (15186) BERNARD, R., P. BUCZYNSKI & G. TONCZYK, 2002 [actually appeared in March 2004]. Present state, threats and conservation of dragonflies (Odonata) in Poland. *Nature Conserv.* 59: 53-71. — (First Author: Dept Gen. Zool., Mickiewicz Univ., Fredry 10, PO-61-701 Poznań).

72 spp. have been so far recorded from Poland. The main current topics in Polish odonotol. studies are presented, and the current picture of the fauna is outlined, with reference to the increased abundance and the broadened ranges of some Mediterranean and southeastern spp. (e.g. *Aeshna affinis*, *Orthetrum albistylum*), and to the falling numbers, the increasing scatter of localities and the narrowing ranges of some other, mainly stenotopic spp. (e.g. *Nehalennia speciosa*, *Coenagrion armatum*, *C. ornatum*). Threats and their mechanisms of affecting dragonflies are analysed, and so are the main modes of odon. conservation (currently used or proposed in Poland). Generally, the state of the Polish odon. fauna is fairly good. The Polish Red List (16 spp.) is discussed, and a list of umbrella spp. for particular habitats is proposed. The Wildermuth's rotation model (cf. OA 13996) is suggested for the management of some habitats. All issues described are presented synthetically and illustrated with the data and examples from Poland.

- (15187) CRAVES, J.A. & D.S. O'BRIEN, 2002. *Dromogomphus spoliatus* (Odonata: Gomphidae) new for Michigan. *Great Lakes Ent.* 35(2): 115-116. — (Rouge River Bird Observ., Envir. Interpretive Cent., Univ. Michigan, Dearborn, MI 48128, USA).
A small population was discovered on 25-VIII-2002 along the Huron R., Wayne Co. On 5-IX-2002, 4 individuals were sighted close to the original locality.

- (15188) CRAVES, J.A. & D.S. O'BRIEN, 2002. *Ischnura hastata* (Odonata: Coenagrionidae) new for Michigan. *Great Lakes Ent.* 35(2): 117-119. — (Rouge River Bird Observ., Envir. Interpretive Cent., Univ. Michigan, Dearborn, MI 48128, USA).

1 ♂ (Ives Rd Fen Preserve, Lenawee Co., 17-VIII-2002); a small population (Northville, Wayne Co., 24-VIII-2002). The habitats are described.

- (15189) FRANCÉ, J., U. FERLETIČ & A. ŠALAMUN, 2002. Poročilo skupine za dvoživke in kačje pastirje. — [Report of the working groups for amphibians and dragonflies]. In: J. Plazar, [Ed.], *Sv. Peter nad Dragonjo 2002: zbirka poročil s pomladnih bioloških raziskovalnih dni*, Dr. študentov biologije, Ljubljana, pp. 29-34. ISBN 961-91041-2. (Slovene). — (Third Author: Čevljarska 28, SI-6000 Koper).

9 odon. spp. are recorded from the Dragonja R. valley and from 2 karst ponds nr St. Peter, NW Istria, Slovenia (1/2-V-2002).

- (15190) GLUPOV, V.V., N.A. KRYUKOVA, V.P. KHO-DIREV & Yu. Ya. SOKOLOVA, 2002. Endocytobionts of haemocytes of the *Aeshna juncea* (L.) dragonfly larvae (Odonata). *Eurasian ent. J.* 1(2): 131-132. (Russ., with Engl. s.). — (First Author: Lab. Insect Pathol., Inst. Anim. Syst. & Ecol., Russ. Acad. Sci., Frunze 11, RUS-630091 Novosibirsk).

In plasmatocytes and (occasionally) in granulocytes endocytobionts, referable to a *Pseudomonas* (bacteria) sp., were identified. In natural populations in the Novosibirsk (Russia) region they occur in 73-78% of *A. juncea* larvae. In laboratory experiments, at increased water temperature (28°C), the mortality of infected larvae amounted to 73-79%, while the mortality of uninfected individuals was only 5-7% of the population. It is postulated, *Pseudomonas* is a normal endocommensal, and becomes pathogenic solely under certain stress conditions.

- (15191) KATBEH-BADER, A., Z. AMR & W. SCHNEIDER, 2002. Odonata of Jordan. *Fragm. ent.* 34(1): 147-170. — (Second Author: Dept Biol., Fac. Sci., Jordan's Univ. Sci. & Technol., Irbid, Jordan).

A total of 47 spp. are reported from Jordan, based on this study and on previous records in literature. *Onychogomphus macrodon* and *Chalcolestes parvidens* are recorded for the first time. Number of specimens examined, collecting sites and dates, and the distribution in Jordan are given for each sp. Remarks on the status, biology or ecology are also provided.

- (15192) KUMAR, Arvind, [Ed.], 2002. *Current trends in odonatology*. Daya Publ. House, Delhi. xiv+377 pp. Hardcover (14.5×22.0 cm). ISBN 81-7035-274-6. — (Editor: Envir. Biol. Res. Unit, Post-Grad. Dept Zool., S.K. Univ., Dumka-814101, India; — Publishers: 1123/74 Deva Ram Park, Tri Nagar, Delhi-110035, India).
This is a collection of 16 papers, some of which were published previously elsewhere. — *Oraon, M.*: Foreword (pp. vii+viiii); — *Kumar, A.*: Preface (pp. ix-x); — *Khaliq, A.*: Potential of dragonflies as bio-control agents of insect pests of rice (pp. 1-26); — *Vick, G.S.*: A community structure of Odonata of the South-West province of Cameroon with the description of *Phyllogomphus corbeti* spec. nov. (Anisoptera: Gomphidae) (pp. 27-82); — *Tembhare, D.B.*: Endocrinology of Odonata (pp. 83-114); — *Kumar, A.*: Ecology of larval odonates in lentic freshwater ecosystems (pp. 115-150); — *Suri Babu, B. & A. Kumar*: Biology of Odonata of Indian sub-continent: a review (pp. 151-168); — *Daniel, B.A., S. Molur & S. Walker*: Conservation Assessment and Management Plan (CAMP) process: a tool to provide strategic guidance for the management of threatened Odonata (pp. 169-188); — *Kumar, A.*: Functional morphology of rectal gills and oxygen consumption by dragonfly nymphs in aquatic ecosystem (pp. 189-206); — *Bohra, C.*: Analytical studies on the food and feeding habits of trophically distinct aquatic odonate larvae of Udhuwa Lake in Santal Pargana, Jharkhand, India (pp. 207-220); — *Prasad, M.*: Odonata diversity in Western Himalaya, India (pp. 221-254); — *Suri Babu, B.*: Description of territoriality and reproduction of *Agriocnemis pygmaea* (Rambur, 1842) (Zygoptera: Coenagrionidae) (pp. 255-272); — *Kumar, A.*: Comparative studies on eco-energetics of nymphs of Anisoptera and Zygoptera (Odonata) in the river Mayurakshi in Santal Pargana, India (pp. 273-279); — *Lahiri, A.R.*: Synopsis of progress in taxonomical studies on Odonata in India (pp. 280-296); — *Kumar, A.*: Odonate diversity in Jharkhand state with special reference to niche specialization in their larval forms (pp. 297-314); — *Roy, S.P.*: Trophic biology and energy contents of larval odonates with special reference to their role in the management of aquatic ecosystem (pp. 315-328); — *Kumari, P.*: Species composition and seasonal fluctuations in biomass of zygopteran nymphs in a wetland of Santal Pargana, India (pp. 329-356); — *Haldar, D.P. & S. Biswas*: On the structure and life history of three new species of septate gregarines (Apicomplexa: Conoidasida) from odonates of West Bengal (pp. 357-377).
- (15193) LEE, S.-M., 2002. ["The dragonflies of Korean peninsula": corrective and supplementary notes]. *Ent. News*. ent. Soc. Korea 6(1): 5-13. (Korean). — (Gil-Eum 1-dong 612-12, Seon-Bug-gu, Seoul, 136-11, Korea).
Concerning Author's book, described in OA 13967.
- (15194) MATUSHKINA, N.O. & L.A. KHROKALO, 2002. *Vyznachnyk babok Ukrainy (Insecta, Odonata): lychnynky ta ekzuvii*. — [Identification key for dragonflies of the Ukraine (Insecta, Odonata): larvae and exuviae]. Ukr. Fitosoc. Centr., Kyiv. 72 pp. Softcover (14.5×20.0 cm). ISBN 966-7938-64-6. (Ukrain.). — (Second Author: Dept. Zool., Fac. Biol., Kyiv Natn. Taras Shevchenko Univ., Volodymyrska 64, UKR-01033 Kyiv).
The larvae of 72 spp. known to occur in the Ukraine are keyed and information on their habitats and distribution, and on adult phenology is provided. Numerous figs are depicting structural peculiarities.
- (15195) OHAMA, S., 2002. [Odonate fauna of Oki islands, Shimane prefecture: supplement]. *Sukashiba* 50: 1-36. (Jap.). — (284-24, Uchinakahara-cho, Matsue, Shimane, 690-0873, JA).
[Abstract not available.]
- (15196) POKORNY, B. & S. AL SAYEGH PETKOV-ŠEK, 2002. Opis stanja v populacijah prosto živečih živali. — [Population status of free-living animals]. In: J. Flis, *Poročilo in ocena vplivov na okolje gradnje opekarnice v glinokopa opekarske glince v Janežovcih*, pp. 40-57, Inst. Ecol. Res. ERICO, Velenje. (Slovene). — (Inst. Ecol. Res. ERICO, P.O. Box 22, SI-3322 Velenje).
This is a chapter in a report on the assessment of impact on the environment by the brickworks in Janežovci nr Ptuj (Styria, Slovenia). 17 odon. spp. are listed. "Platycnemis latipes" is a misidentification.
- (15197) SIDDIQI, S.Z. & R.A. KHAN, 2002. Comparative limnology of a few man-made lakes in and around Hyderabad, India. *Occ. Pap. zool. Surv. India* 203: 1-64. ISBN 81-85874-83-2. Price: US \$ 8.- net. — (Second Author: Zool. Surv. India, 234/4, AJC Bose Rd, Nizam Palace, Calcutta-700020, India).
Non-identified Zygopt. and Anisopt. larvae are listed from Hussain Sagar and Saroor Sagar, Andhra Pradesh, India.
- (15198) SWITZER, P.V., 2002. Individual variation in the duration of territory occupation by males of the dragonfly *Perithemis tenera* (Odonata: Libellulidae). *Ann. ent. Soc. Am.* 95(5): 628-636. — (Dept Biol. Sci., Eastern Illinois Univ., Charleston, IL 61920, USA).
In *P. tenera*, ♂♂ defend territories around oviposition sites

and defense of a site is critical for reproductive success. This study first demonstrated that individual ♂♂ varied consistently in how long they defended a particular territory within a day (their "tenure") and in the quality of the sites they defended. Subsequently, some factors were investigated that may have affected territory tenure and may have led to the observed variation among ♂♂. Territory occupations that ended "voluntarily" were significantly longer than those that ended because the ♂ was evicted from his territory. For voluntary desertions, tenure duration was unrelated to age, wing length, the amount of time the ♂ fought that day, or site quality. However, tenure durations were longer for ♂♂ that arrived earlier in the day than for those that arrived later, and consistent differences existed among ♂♂ in arrival time. Furthermore, tenure durations were longer when ♂♂ had successfully mated than when they did not mate; available evidence suggests that this pattern may be because mating success causes them to stay longer. Thus, the results suggest that the problem of explaining tenure duration in *P. tenera* can be largely broken down into identifying factors that affect a ♂'s likelihood of being evicted and his relative arrival time. Overall, ♂♂ that defended better sites and ♂♂ that had longer wings were territorial for fewer total days. Of these 2 factors, site quality seems to have a larger effect than wing length on the number of days, suggesting that ♂♂ may incur an increased cost by defending sites that are more attractive to other ♂♂.

- (15199) TOTH, S., 2002. Odonatological investigations in the Vörös János-séd valley. *Fol. Mus. hist.-nat. bakonyiensis* 19: 31-42. (Hung., with Engl. s.). — (Széchenyi u., HU-8420 Zirc).

The area is situated in the Bakony Mts, Hungary. A commented list of 39 spp. is presented, the nationally interesting taxa are emphasized, and a biogeographic analysis of the fauna is given.

2003

- (15200) [ABSTRACTS OF PAPERS presented at the Annual Meetings of the Japanese Society for Odonatology], 2001-2003. JSO, Matsumoto. ISSN none. (Jap.). — (c/o K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545-0004, JA).
2001 (30 pp.), 2002 (18 pp.), 2003 (32 pp.). Translation of the titles is not available.

- (15201) *AESCHNA*, Osaka (ISSN 1341-1047), No. 39 (30 Dec. 2002), No. 40 (30 Dec. 2003). (Jap., with Engl. titles, some papers with Engl. s.). — (c/o K. Inoue, 5-9, Fumi-

nosato 4-chome, Abeno-ku, Osaka, 545-0004, JA).

[No. 39:] *Ozono, A.*: Notes on some field observations on the reproductive behavior of *Sarasaeschna kunigamiensis* (Ishida) in Okinawa Is. (pp. 1-13); — *Yoshida, M.*: Collecting and breeding data of some odonate larvae, 5th report (pp. 14-18); — *Futahashi, R. & Y. Araki*: The Odonata fauna of Takamagahara High Moor, Oyama, Toyama pref. including the first record of *Sympetrum danae* from Toyama pref. (pp. 19-24); — *Ozono, A.*: The colour variations of *Gynacantha japonica* Bartenef in Okinawa Is., Ryukyu archipelago, Japan (pp. 25-27); — *Yoshida, M.*: Some Odonata need moisture (pp. 29-31); — *Hara, T.*: Records of the larvae of *Macromia daimoji* Okumura from Kyoto river at Yamaguchi prefecture (p. 32); — *Kitagawa, K. & N. Katatani*: Notes on Thai Odonata, 1: the Odonata from Chantaburi in March 1998 (pp. 33-42); — *Muraki, A.*: Two observation cases of the egg-laying of *Macromia chaiyaphumensis* inhabiting northern Thailand (p. 43); — *Ozono, A.*: Copulation of *Chlorogomphus okinawensis* Ishida (p. 44). — [No. 40:] *Sasamoto, A. & H. Shibata*: A record of Odonata collected in Biak Island, Indonesia (pp. 1-7); — *Katatani, N.*: A record of dwarf specimen of *Ischnura senegalensis* (p. 8); — *Yokoyama, T.*: Notes on the durations of egg stages in some dragonflies in Hokkaido (pp. 9-12); — *Kitagawa, K. & N. Katatani*: Notes on the Odonata of Thailand, 2: the Odonata from Trang prefecture in March 1998 (pp. 13-23); — *Muraki, A.*: First record of *Sympetrum fonscolombei* (Selys) from the northern part of Kyoto prefecture (p. 24); — *Yoshida, M.*: Collecting and breeding data of some odonate larvae, 6th report (pp. 25-32); — *Yokoi, N.*: A record of Odonata in central Laos (pp. 33-35); — *Sugitani, A.*: *Sarasaeschna preyeri* on my finger (p. 36).

- (15202) ANDERSON, T.M., 2003. Detachment of *Arrenurus hamrumi* larvae (Hydrachnida: Arrenuridae) from *Argia vivida* (Odonata: Coenagrionidae). In: I.M. Smith, [Ed.], *An acarological tribute to David R. Cook*, pp. 1-9, Indira Publ. House, West Bloomfield/MI. ISBN 0-930337-18-2. — (Div. Sci. & Math., Univ. Minnesota, Morris, MN 57267, USA).

Water mite larvae must detach from their insect hosts after engorgement and return to the aquatic environment to complete their life cycle. Previous studies of *Arrenurus* mites suggest that stimuli for detachment are associated with host oviposition, damage to the host, or mortality of hosts over the water. Here, detachment of *A. hamrumi* from adults of *A. vivida* was studied. This host-parasite association is common in rangeland springs in wetlands in central Oregon, USA. Tandem pairs of damselflies were collected to determine if mites detach

during oviposition. Field experiments using individually caged damselflies with engorged mites were conducted to determine if mites preferentially detach while over the water and if they detach from both ♂ and ♀ hosts. Mite larvae rarely occurred on hosts captured in tandem flight, although both ♂ and ♀ *A. vivida* showed evidence of previous mite infestation. Engorged mite larvae detached from both ♂ and ♀ damselflies placed over water so a factor associated exclusively with oviposition is not the primary cue for detachment. Confining damselflies over a pan of water placed on land did not induce significant levels of mite detachment, probably because the humidity level was lower than that found over the natural aquatic habitat. Damselflies often perch on emergent vegetation in a zone of high humidity just above the water, which enables mites detaching in response to a humidity cue can drop directly into the water and continue the life cycle.

- (15203) BEKETOV, M.A., 2003. *Podenki i strekozy Verhnego Priob'ya i ih primeneniye v biomonitoringe i ekotoksikologicheskikh issledovaniyakh*. — [Mayflies and dragonflies of the Upper Ob Basin and their application in biomonitoring and ecotoxicological studies]. Autoref. Diss. Kand. Biol. Nauk, St. Agric. Univ., Novosibirsk. 22 pp. (Russ.). — (P.O. Box 156, RUS-630048 Novosibirsk).

The odon. response to the total anthropogenic pressure on the catchment areas was examined. Biomonitoring studies have shown that high contaminant concentrations in rivers trigger the decrease of odon. species richness and diversity in the Basin. Species richness of Odon., Ephemeroptera and of the total macroinvertebrates are positively correlated. Toxicological experiments indicated low resistance of *Lestes sponsa* larvae to insecticides deltamethrin and esfenvalerate. In contrast, the tolerance to these pyrethroids of *Cordulia aenea* was high. The sensitivity to ammonia in *Erythromma najas*, *L. sponsa* and *Sympetrum flaveolum* larvae was low. The influence of pH, ionic composition of water, and of feeding was also examined. The odon. are considered as valuable indicators in biomonitoring, and they are useful as test organisms in ecotoxicological studies. — This is solely a printed summary of the original dissertation (173 pp., 38 tabs, 20 figs incl.), which is not available for abstracting.

- (15204) CHOCHÉL, M., 2003. Beitrag zur Verbreitung von *Gomphus vulgatissimus* (Linnaeus, 1758) im Landschaftsschutzgebiet Labské pískovce und seine Bionomie (Odonata, Gomphidae). *Sb. oblast. Muz. Moste* (Pfir.) 25: 37-38. (Czech, with Germ. s.). — (Malá Veleň 23, CZ-407 22 Beneškov-nad-Ploučnici).

3 larvae (adults emerged in captivity) and 1 exuvia from the Elbe R nr Děčín/Tetschen, Czech Republic, are brought on record; 7-V-2003.

- (15205) CORBET, P.S., 2003. A positive correlation between photoperiod and development rate in summer species of Odonata could help to make emergence date appropriate to latitude: a testable hypothesis. *J. ent. Soc. Br. Columb.* 100: 3-17. — (Crean Mill, St Buryan, Cornwall, TR19 6HA, UK).

In the western Nearctic and the Palaearctic Regions several Odon. spp. occur without evident gaps in distribution, from latitude 50°N northwards to the Arctic Circle (66°30'N) and beyond. The decline in incident solar radiation along this latitude gradient does not appear to be reflected, as might be expected, in progressively later emergence, despite the progress of metamorphosis being dependent on ambient temperature. On the contrary, reports indicate that, in some spp., northernmost populations may emerge at least as early as, and sometimes even earlier than, more southerly populations, suggesting that some mechanism exists that enables larval developmental rate to compensate for latitude. Reported responses by late-stadium larvae to photoperiod, placed in the context of seasonal changes of photoperiod at different latitudes, make it plausible to postulate the existence of a single fixed response to photoperiod that would continuously adjust developmental rate to latitude, at least between 50° and 70°N. In Odon. such a response, to be effective, would be confined to spp. possessing a Type-2 or Type-3 life cycle, in which more than one stadium precedes metamorphosis in spring or early summer. The hypothesis proposed here does not invoke genetic heterogeneity of response in populations at different latitudes, such as has been detected in certain other insects. The response predicted by the hypothesis may complement, rather than substitute for, other mechanisms of seasonal regulation. Steps are described by which the hypothesis could be tested in Odon.

- (15206) CRICK, K. & J. BENNETT, 2003. *Blackwater Valley dragonflies*. Blackwater Valley Countryside Partnership, Aldershot/Hants. 48 pp. Softcover (14.7×21.0 cm). ISBN 1-85975-635-2. Price: UK £ 3.- net. (Publishers: Ash Lock Cottage, Government Rd, Aldershot, Hants., GU11 2PS, UK).

The odon. fauna of the Blackwater Catchment, between the borders of Berkshire, Hampshire and Surrey, UK, was largely summarized by A.W. Richards, in *J. Soc. Br. Ent.* 1(9): 262-264 [1939]; 2(2): 61-64 [1940]; and 2(3): 117-119 [1941]. His preserved Blackwater speci-

- mens are referable to 17 spp. and are now held by the Surrey Heath Mus., Camberley. — The present, full colour field guide covers 30 spp. hitherto known in the Blackwater Catchment area. Each sp. is briefly described along with the information on its habitat, local distribution and flight period. Close-up photographs of each sp. are also provided. Of particular interest is the brief outline of the history of the aquatic nature of the Valley. The latter is considered a "dragonfly paradise" and one of the best (to the general public easily accessible) dragonfly areas in Britain. — This is an attractive, informative and nicely produced book, useful to all interested in the odon. fauna of southern England.
- (15207) DE JONG, T.H., 2003. *Soortbeschermingsplan Winterjuffers*. — [Conservation strategy for *Sympecma damsselflies*]. Provincie Utrecht, Utrecht. 44 pp. Softcover (16.0x23.6 cm). ISBN none. (Dutch). — (Distributor: Provincie Utrecht, Sector Ecologisch Onderzoek, P.O. Box 80300, NL-3508 TH Utrecht; — Author: Bureau Viridis, Rijnlaan 25, NL-4105 GS Culemborg).
A small monograph on biology and ecology of *S. fusca* and *S. paedisca* in the Netherlands, with a review of observations elsewhere in Europe, and with emphasis on the situation in the province of Utrecht. In the province, *S. fusca* breeds at a number of sites in and along the Utrechtse Heuvelrug. The sole possible breeding site of *S. paedisca* is the Tienhovenskanaal, where it may have bred until 1974. All other records concern the individuals at localities remote from any kind of water body. In Utrecht, there is no evidence of co-occurrence of the 2 spp. at a watersite, though observations are available on their co-occurrence in land habitats. The aquatic habitats of the 2 spp. differ somewhat, while their land habitat types are largely overlapping. All these are described and defined, all provincial records are reviewed and assessed, and the required conservation strategy is outlined.
- (15208) DE MARMELS, J., 2003. Odonatos. In: M. Aguilera, A. Azócar & E. González Jiménez, [Eds], *Biodiversidad en Venezuela*, Vol. 1, pp. 312-325, Fundación Polar & Minist. Cien. y Technol., Caracas, ISBN 980-379-051-X. — (Mus. Inst. Zool. Agric., Fac. Agron., Univ. Central Venezuela, Aptdo 4579, Maracay 2101-A, Venezuela).
Currently, 15 fam., 121 gen. and 484 spp./spp. are known from Venezuela (2 gen. & 32 spp. still undescribed), but the fauna is estimated to include ca 600 spp./spp. The odon. highlights of the 7 biogeographic regions of Venezuela are outlined, a documented list of taxa that are possibly of conservation interest is provided, and the priorities for future research are specified.
- (15209) DOLNÝ, A., 2003. Faunistical data on endangered and protected dragonflies (Insecta: Odonata) in the Polish part of Upper Silesia (Opolskie and Śląskie voivodships). *Natura Silesiae superioris* 7: 89-91. (With Pol. & Germ. s's). — (Katedra Biol. & Ecol., PFF, Ostrava Univ., Chitussiho 10, CZ-710 00 Slezská Ostrava).
Based on the 2003 survey, detailed information on the occurrence of 10 spp. is presented.
- (15210) DOLNÝ, A., A. MISZTA & J.B. PARUSEL, 2003. Dragonflies (Insecta: Odonata) of four nature reserves in Śląskie voivodship (Polish part of Upper Silesia): the results of a preliminary study. *Natura Silesiae superioris* 7: 93-103. (Pol., with Engl. & Germ. s's). — (First Author: Katedra Biol. & Ecol., PFF, Ostrava Univ., Chitussiho 10, CZ-710 00 Slezská Ostrava).
A commented list of 40 spp., recorded in 2002. *Aeshna juncea*, *Somatochlora arctica*, *Orthetrum albistylum*, *O. coerulescens*, *Crocothemis erythraea*, *Leucorrhinia albifrons* and *L. pectoralis* are considered of particular interest.
- (15211) FERLETIČ, U., 2003. Dragonfly (Odonata) group. *Proc. 1st Danube R. Basin ecol. Youth Camp Mura 2003*, Srednja Bistrica, pp. 21-26. (With Slovene s.). — (Marezige 1, SI-6273 Marezige).
A commented list of 32 spp., evidenced (Aug. 2003) in the area between Dokležovje and the point where Slovenia, Hungary and Croatia meet (Prekmurje, NE Slovenia).
- (15212) GERAEDS, R.P.G., 2003. Perspectieven van de Roer voor stroomminnende libellen. — River Roer offers perspectives for dragonflies of running water. *Natuurh. Maandbl.* 92(9): 223-227. (Dutch, with Engl. s.). — (Julianalaan 46, NL-6042 JH Roermond).
Unlike in Germany, in its Netherlands section the Roer R. meanders naturally, presenting therewith a great variety of habitats. Water quality is reasonable, and the occurrence of such spp. as e.g. *Calopteryx splendens*, *Cercion lindenii*, *Gomphus vulgatissimus*, *G. pulchellus*, *G. flavipes*, *Ophiogomphus cecilia*, etc. makes the river a unique habitat of rheophile Odon. in the Netherlands.
- (15213) GOURNAY, A. & R. CÉRÉGHINO, 2003. Observations sur le régime alimentaire de quelques larves d'odonates de mares rocheuses des Causses du Quercy. *Bull. Soc. Hist. nat. Toulouse* 139: 5-9. (With Engl. s.). — (Lab. Ecol. Hydrosyst., UMR 5177, Univ. P. Sabatier, 118 rte de Narbonne, Bât 4R3, F-31062 Toulouse).
The diet of 1 *aeshnid* and 4 libellulid spp. from rocky ponds in the Causses du Quercy region (dépt Lot, France)

- was studied. Zooplankton played a major role in the diet of all spp., as apparent from the gut contents. All spp. ingested oligochaets, but did not use either snails, caddisflies or zygopt. larvae. The results are discussed with reference to the use of food resources in small lentic ecosystems.
- (15214) HERMANS, J.T. & B. VAN MAANEN, 2003. Libellen van de Beegderheide: inventarisatieresultaten van imago's en larven in 2001 en 2002. — Dragonflies of the Beegderheide area: survey finds from 2001 to 2002. *Natuurh. Maandbl.* 92(5): 126-133. (Dutch, with Engl. s.). — (First Author: Hertestraat 21, NL-6067 ER Linne). A list of 35 spp., with comments on 8 of these; — Zuid Limburg prov., the Netherlands.
- (15215) ISHIGAKI, K., 2003. [Senryu and bookplates]. *News! Nippon Exlibris Ass.* 125: 6 (Jap.). — (c/o Nippon Exlibris Ass., 2F, Ishihara Bldg, 2-13-7 Uchikanda, Chiyoda-ku, Tokyo, 101-0047, JA). Includes reproductions of 3 dragonfly bookplates, by Fumio Kitaoka, Yoshio Kanamori and G. Tsukagoshi, from the Y. Isobe collection.
- (15216) KHROKALO, L.A. & B.M. SHESHURAK, 2003. Sezonna dynamika l'otu babok (Insecta: Odonata) Pivnichnogo Shodu Ukrainy. — [Seasonal flight dynamics in dragonflies (Insecta: Odonata) of the northeastern Ukraine]. *6 Z'izd ukrain. ent. Tov.*, bila Cerkva, p. 136 [abstract only]. (Ukrain.). — (Second Author: Dept Zool., Fac. Biol., Kyiv Taras Shevchenko Univ., Volodymyrska 64, UKR-01033 Kyiv). Based on literature (1881-2000) and systematic field observations (1998-2000), and gleaned from specimen labels in museum collections (1987-2002), flight periods in NE Ukraine were identified for 50 spp.
- (15217) KOČEVAR, B., 2003. *Krajinski park Središče ob Dravi*. — *Landscape Park Središče-ob-Dravi*. Lovska družina Središče, Središče ob Dravi. 26 pp. ISBN none. (Slovene, with Germ. & Engl. s's). — (Distributor: Lovska družina Središče, SI-2277 Središče-ob-Dravi). Over 30 odon. spp. are known from the Park (Styria, Slovenia); some are mentioned here. Of particular interest is *Ophiogomphus cecilia*, breeding in the Drau R.
- (15218) LAHIRI, A.R., 2003. A new species of the genus *Bayadera* Selys (Odonata: Euphaeidae) from India, with notes on its Indian representatives. *Rec. zool. Surv. India* 100(3/4): 39-42. — (Zool. Surv. India, M-Block, New Alipore, Calcutta-700053, India). *B. chittaranjani* sp. n. is described and illustrated. Holotype ♂: 15 km S of Chandil, Manipur, 18-II-1992, deposited in the National Zool. Coll. (ZSI 4074/H13). The 5 Indian members of the genus are keyed.
- (15219) LEONT'EV, A.V., 2003. Strekozy (Insecta, Odonata) malyh rek Penzenskoy oblasti. — [Dragonflies (Insecta: Odonata) of the small rivers in the Penza district]. In: G.S. Rozenberg et al., [Eds], *Ekologicheskie problemy krupnykh rek*, p. 157, Inst. Ekol. volzhskogo Basseyina, Russ. Acad. Nauk, Tol'yatti, ISBN 5-94535-207-9. (Russ.). — (State Pedagog. Univ., Penza, Russia). During 2000-2002, the odon. fauna of 20 small rivers in the district was surveyed. 10 spp. were identified, of which *Calopteryx splendens*, *C. virgo*, *Lestes viridis*, *G. vulgatissimus* and *Sympetrum pedemontanum* appear restricted to flowing water.
- (15220) MEAD, K., 2003. *Dragonflies of the North Woods*. Kollath-Stensaas, Duluth/MN. x+203 pp. Softcover (11.2x21.0 cm). ISBN 0-9673793-6-9. Price: US \$ 18.95 net. — (Publishers: 394 Lake Ave South, Suite 406, Duluth, MN 55802, USA). The field guide covers the fauna (102 pp.) of NE Minnesota, N Wisconsin, the Upper Peninsula of Michigan (all USA), and N Ontario (Canada). In the introductory chapters, brief information is presented on biology, behaviour, and on technical and other aspects of field work. The adults of all spp. are briefly described, notes on their habitats and feeding (hunting) habits are given, and a phenogram for each sp. is added. Also provided are a col. phot. of each sp., and a line drawing, in which structural peculiarities that are of importance for identification are marked. Useful are various annotations ("Nature notes") on the status, whereabouts etc. for each sp.
- (15221) MEY, D., 2003. Vorkommen und Beobachtungen zur Verhaltensweise der Feuerlibelle *Crocothemis erythraea* Brullé, 1832 (Odonata: Libellulidae) in Thüringen. *Veröff. NaturkMus. Erfurt* 22: 137-148. (With Engl. s.). — (Karl-Hermannstr. 3, D-99848 Wutha-Farnroda). Since 2001, *C. erythraea* was noticed at 3 sites in W and central Thuringia, Germany. The habitats are described, observations on its behaviour are minutely recorded, and the lists of the odon. assemblages at the 3 localities (total 41 spp.) are appended.
- (15222) MONAKOV, A.V., 2003. *Feeding of freshwater invertebrates*. Kenobi, Gent. viii+373 pp. Softcover (16.0x24.0 cm). ISBN 90-804-341-3-2. Price: 70.- net. — (Publishers: Kenobi Productions, Simon-De-Mirabellostraat 2, B-9000 Gent).

- This is an updated Engl. edn of the original Russian work, a comprehensive systematical treatment of the food & feeding (= trophology) in all freshwater invertebrate groups (Odon. pp. 241-251). A well-balanced review is of particular importance, since it is based on "western" and (generally less known) Russian works, all listed in the exhaustive reference lists, given for each group separately. In larvae of various odon. spp., feeding mechanism and food composition are described, and quantitative data (incl. daily rations and feeding efficiency) are discussed and shown in tabs. — A valuable work.
- (15223) NARAOKA, H., 2003. Larval growth of *Mor-tonagnion selenion* (Ris) in Aomori pref., Japan (Odonata: Coenagrionidae). *J. nat. Hist. Soc. Aomori* 8: 55-58. (Jap., with Engl. title). — (36-71, Motoizumi, Fukunoda, Itay-anagi, Kita-gun, Aomori, 038-3661, JA).
[Abstract not available.]
- (15224) PACHECO-FLORES, C., C. DELOYA & P. CORTÉS-GENCHI, 2003. Lista de nombres de insectos en lengua Tlapaneca de la "Región de la Nobtaña", Guerrero, Mexico (Arthropoda: Insecta). *Folia ent. mex.* 42(3): 309-320. (Span., with Engl. s.). — (First Author: Dept Ent., Inst. Ecol. A.C., Apto postal 63, MX-91070 Xalapa, Mexico).
For 41 insect spp. of various orders Tlapaneco vernacular names are stated. In this native Mexican language the anisopterans are called *xca' da*.
- (15225) PARK, Y.-L. & J. BRADSHAW, 2003. Insect origami: into the fold. *Am. Entomologist* 49(1): 210-213. — (First Author: Dept Ent., Univ. California, Riverside, CA, USA).
The principles of insect origami are outlined, a review is presented of the insects folded (46 fam. in 20 orders), its application in entomological education is advocated, and some tips are offered. 2 aeshnid types are shown, and for the odon. reference is made to several web sites and to the work: Lang, R.J., 1995, *Origami insects and their kin*, General Publishing, Toronto).
- (15226) PTEROBOSCA. Newsletter of the Japanese Society for Odonatology (ISSN none), No. 7B (1 Oct. 2001), No. 8A (15 March 2002), No. 8B (1 Oct. 2002), No. 9A (15 Feb. 2003), No. 9B (1 Dec. 2003). (Jap.). — (c/o Dr S. Eda, 3-4-25, Sawamura, Matsumoto, Nagano, 390-0877, JA).
[Translation of the titles of the papers not available.]
- (15227) SAUX, C., C. SIMON & G.S. SPICER, 2003. Phylogeny of the dragonfly and damselfly order Odonata as inferred by mitochondrial 12S ribosomal RNA sequences. *Ann. ent. Soc. Am.* 96(6): 693-699. — (First Author: Dept Biol., San Francisco St. Univ., 1600 Holloway, San Francisco, CA 94132, USA).
The phylogenetic relationships were inferred from mitochondrial DNA 12S ribosomal RNA sequences data. These show support for a monophyletic Anisoptera, and are consistent with the previous phylogenetic work on the group. However, the Zygoptera are paraphyletic based on mitochondrial DNA evidence. In particular, Lestidae appear more closely related to the Anisoptera than the Zygoptera.
- (15228) SCHLUPMANN, M., 2003. Beitrag zur Flora und Fauna der Erfttales bei Grevenbroich. 2. Fauna. *Decheniana* 156: 261-286. (With Engl. s.). — (Hierser Weg 18, D-58119 Hagen).
6 odon. spp. are listed and their status in the Erfttal assessed; — North Rhine-Westphalia, Germany.
- (15229) SIOJA [Information bulletin of the SIO Japan Branch Office], Osaka, 2002, No. 2 (23 Nov. 2002), 2003, No. 1 (5 Dec. 2003). (Jap.). — (c/o K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545-0004, JA).
Mostly internal management notifications. — 2002/2 includes a report on the SIO East Asia Regional Symp. (Seoul, Korea, July 2002; with a group phot.), and a note on the visit of some Siberian workers to Japan.
- (15230) TANAKA, M. & K. HIGASHI, 2003. Long term fluctuations in populations of dragonflies, *Pantala flavescens* and *Pseudothemis zonata* (Odonata, Libellulidae), in Tomioka, Amakusa island, Kumamoto. *J. Fac. Cult. Educ. Saga Univ.* 7(2): 33-45. (Jap., with Engl. title). — (Second Author: Chifu, 3062-1, Kinryu-machi, Saga, 849-0905, JA).
[Abstract not available.]
- (15231) TAYLOR, P., 2003. *Dragonflies of Norfolk*. Norfolk & Norwich Naturalists' Soc., Norwich. [Occ. Publ. 9]. 56 pp., 20 col. pls excl. Softcover (14.7x21.0 cm). — (Publishers: c/o Norwich Castle Mus., Norwich, NR1 3JU, UK; — Author: Decoy Farm, Decoy Rd, Potter Heigham, Norfolk, NR29 5LX, UK).
The attractive booklet is divided into 2 parts. The first of these (pp. 1-32) contains concise general information on dragonfly life cycle, behaviour, identification and habitat requirements, and presents the descriptions of 8 of the best Norfolk dragonfly sites. Currently, 32 spp. are known

from the county, incl. *Lestes barbarus*, discovered and photographed in June 2003, which is new for Britain. The second part of the book is a facsimile reprint of the 1990 review paper by P.J. Milford & A.G. Irwin (listed on OA 11044). The beautiful habitat and dragonfly photographs enhance the attractivity of the book.

- (15232) THEISCHINGER, G. & G. FLECK, 2003. A new character useful for taxonomy and phylogeny of Anisoptera (Odonata). *Bull. Soc. ent. Fr.* 108(4): 409-412. (With Fr. & Germ. s's). — (First Author: Envir. Prot. Authority NSW, 480 Weeroona Rd, Lidcombe, NSW 2141, AU). The presence/absence of a well-defined, narrow, largely parallel-sided, medio-basal groove of variable length on the ventral face of the prementum is introduced as a useful character for the separation of the larvae of corduliid/corduliine s.l. from libellulid/libelluline s.l. genera. It is pointed out that this groove is also present in some members of all epiproctophoran families. The distribution of the character in Libelluloidea and its potential for rapid biological assessment and phylogenetic studies are discussed. It is suggested that the absence of the groove/suture is apomorphic. A table showing the hitherto established presence of the groove/suture in the corduliid genera of the World is presented.

- (15233) VAN LIESHOUT, F., E. PEETERS, R. FRANKEN & R. KUIPER, 2003. De Allier, ecologische referentie voor de Grensmaas? — The river Allier as an ecological reference for the "Border Meuse"? *Natuurh. Maandbl.* 92(1): 10-16. (Dutch, with Engl. s.). — (Aquat. Ecol. Water Quality Mngmt, Univ. Wageningen, P.O. Box 8080, NL-6700 DD Wageningen). An ecological comparison is made between the section of the Meuse R. that forms the border between Belgium and the Netherlands (colloquially called "Border Meuse") and the Allier R. in France. As far as the odon. are concerned, the calopterygids and gomphids occur in the Allier, but they are absent in the "Border Meuse". Species lists are not provided.

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- (15234) ABDALLAH, A. et al. [30 joint authors], 2004. Comparative studies on the structure of an upland African stream ecosystem. *Freshw. Forum* 21: 27-47. — (Correspondence to: B. Moss, Sch. Biol. Sci., Jones Bldg, Univ. Liverpool, Liverpool, L69 3GS, UK). A comparison is presented between ecological communities of 2 stretches of the Dodwe R., Amani Nature Reserve, Tanzania. 6 odon. fam. are considered, and their

association with 4 types of habitats (erosive riffles, erosive pools, floodplain sediment and floodplain debris dams) is pointed out.

- (15235) AGRION, PURLEY. Newsletter of the Worldwide Dragonfly Association (ISSN 1476-2552), Vol. 7, No. 2 (July 2003), Vol. 8, No. 1 (Jan., 2004). — (c/o J. Silsby, 37 Astoria Court, 116 High Street, Purley, Surrey, CR8 2XT, UK). [Selected articles:] [7/2:] May, M. & P. Corbet: The third WDA International Symposium of Odonatology (1); — Summaries of Board of Trustees meetings at Beechworth (pp. 15-16); — Ubukata, H.: A pleasant journey to made me acquainted with Brazilian odonatologists as well as dragonflies (pp. 18-19); — Taylor, J.: What to do with an unwanted swimming pool: turn it into a dragonfly pond (pp. 19-21); — Corbet, P.: R.J. Tillyard FRS (1881-1937): a giant among odonatologists (pp. 21-24). — [8/1:] Dow, R.: Looking for Odonata in Hong Kong and Malaysian Borneo (pp. 3-4); — Chelmick, D.: *Macromia splendens* in Iberia (p. 4-5); — Hämäläinen, M.: The 150th anniversary of Selys' Synopsis des caloptérygines (pp. 5-8); — Orr, B.: An odonatologist in London (pp. 8-9); — Marinov, M.: *Caliaeschna microstigma* and me (pp. 9-10); — Tennesen, K.: Minter J. Westfall Jr passes away (pp. 10-11).
- (15236) ARGIA. The news journal of the Dragonfly Society of the Americas (ISSN 1061-8503), Vol. 16, No. 1 (5 Apr. 2004). — (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA). [Scientific articles:] Beckemeyer, R.: Aerobatic Anisoptera & zooming Zygoptera: Odonata flight from A to Z, 2: dragonfly wings: responding to pressure (pp. 4-8); — Catling, P.M., S. Carriere, D. Johnson & M. Fournier: Dragonflies of the Northwest Territories, Canada: new records, ecological observations and a checklist (pp. 9-13); — Egan, D.: Lawsuit filed to establish habitats for dragonfly (pp. 13-14); — Beckemeyer, R.: Have insects been around since the Silurian? (pp. 14-15; review of a publication); — Daigle, J.J.: Hunt for Red October [= "red Orthemis"] (pp. 15-16); — Fothergill, K., J. Keebaugh & M. Austin: First records of *Cordulegaster dorsalis* in Idaho (pp. 16-18); — Hummel, S.: New county records for Iowa: 1999-2003 (pp. 18-22); — Dwayne, L.S., A.W. Thomas & H.S. Makepeace: New Canadian and provincial odonate records for the New Brunswick (pp. 22-24); — Meurgey, F. & C. Perron: *Anax amazili* new for Guadeloupe and notes on other rare species (French West Indies) (p. 24); — Newly discovered Odonata localities in the Dominican Republic (West Indies) (p. 25); — First French record for *Anax junius* (Drury, 1773) (pp. 25-26); — Beckemeyer,

- R.: Some Odonata records for the Midwest and West for 2003 (p. 26); — *Paulson, D.*: Lestes forficula new record from Cayman Islands (p. 26); — *Aguillard, D.*: Paltothemis lineatipes explosion in California (p. 28).
- (15237) *ATROPOS* (ISSN 1478-8128), No. 21 (Feb. 2004), No. 22 (May 2004). — (c/o M. Tunmore, 36 Tinker Lane, Maltham, Holmfirth, W Yorks, HD9 4EX, UK). [Odon. articles:] [No. 21:] *Brook, J. & G. Brook*: Past breeding evidence of Willow Emerald Dragonfly Chalcostes viridis (Vander Linden) in Kent (pp. 3-6); — *Dewick, S.*: Un update on the continued success of Small Red-eyed Damselfly Erythromma viridulum (Charp.) at its first known British sites (pp. 14-15); — *Twissell, I.*: County focus: Gloucestershire. Dragonflies (pp. 21-22); — *Parr, A.*: Migrant dragonflies in 2003 (pp. 28-34). — R eports from coastal stations, 2003 [locality map incl.]: *Medland, J.*: Guernsey, Channel Islands: Odonata (p. 39); — *Scott, M.A. & W.J. Scott*: Longstone Heritage Centre, St Mary's, Isles of Scilly (pp. 39-42); — *Tunmore, M.*: The Lizard Peninsula, Cornwall (pp. 43-45); — *Cade, M.*: Portland, Dorset (pp. 47-50); — *Knill-Jones, S.*: Isle of Wight (pp. 50-51); — *Yates, B.*: Rye Harbour, East Sussex (pp. 53-54); — *Hunter, I.*: Elms Farm, Icklesham, East Sussex (pp. 54-55); — *Clancy, S.*: Dungeness area, Kent (pp. 55-57); — *Solly F.*: Isle of Thanet (pp. 57-59); — *Jarman, N. et al.*: Kingsdown Beach, Kent (pp. 59-60); — *Dewick, S.*: Curry Farm, Bradwell-on-Sea, Essex (pp. 60-63); — *Odin, N.*: Landguard Bird Observatory, Sussex (pp. 63-64); — *Harvey, R.*: Minsmere RSPB Nature Reserve, Suffolk (pp. 64-65); — *Bowman, N.*: Eccles-on-Sea, Norfolk (pp. 65-66); — *Sykes, T.*: Gibraltar Point, Lincolnshire (p. 66); — *Spence, B.*: The Spurn area, East Yorkshire (pp. 66-68); — *Hayden, J.*: Skomer Island NNR, Pembrokeshire (pp. 68-69); — *Scott, D.A.*: Dursey Island, Co. Cork (pp. 69-70); — *Rasmussen, J.*: Recent dragonfly news from Denmark (pp. 79-80); — *Ravenscroft, J.*: 'Old female' form of Common Darter Symptetrum striolatum (p. 80); — *Forrest, P.J.*: Southern Emerald Damselfly Lestes barbarus in Kent (p. 81); — *Jones, P.*: Small Red-eyed Damselfly Erythromma viridulum caught at light (p. 81); — *Goddard, D.*: Dragonfly conservation from the BDS (p. 82). — [No. 22:] *Hunter, M.*: Durham's dragonflies (pp. 25-29, pl. 1, fig. 2, pl. 6 fig. 24 excl.); — *Parr, A.*: Dragonfly records from autumn 2003 (pp. 30-31); — *Tunmore, M.*: [book review] Field guide to the dragonflies and damselflies of Great Britain and Ireland, by S. Brooks & R. Lewington, revised edn, 2004 (p. 55); — *Parr, A.J.*: Odonata Records Committee update (p. 60); — *Beynon, T.*: Dragonfly conservation from the BDS (pp. 63-64).
- (15238) *BARNARD, P.C.*, 2004. The 2002 Presidential address, part 2: A history of fishing flies. *Br. J. Ent. nat. Hist.* 17(1): 1-9. — (Dept Ent., Nat. Hist. Mus., Cromwell Rd, London, SW7 5BD, UK).
The first written record of flyfishing seems to be by the Roman rhetoric teacher and miscellaneous writer, Claudius Aelianus (ca AD 170-235), in one of his chief works, *De animalium natura* (ca AD 200). In the present paper, the history of flyfishing in Britain is traced from 1496. Reference is made to the work, *Salmonia, or days of fly-fishing* (Murray, London, 1828) by the famous physicist and inventor (of the miners' safety lamp, for example), Sir Humphrey Davy (1778-1829), who was a passionate fisherman, and described and illustrated there a great number of his artificials and their corresponding insect species. No taxonomic names of the latter are provided, and he stated: "... I have not, however, the knowledge, or if I had, have not the time, to go through the lists of these interesting little animals ...". Nevertheless, Davy was a keen insect observer, apparently much interested also in dragonflies. About these he wrote (*Salmonia*, p. 155): "... The libellula, or dragon-fly, the most voracious in the winged insect tribe, deposits her eggs in such a manner, that the larvae fall into the water, and, after destroying and feeding upon almost all the aquatic insects found in the element, and changing their skins at various times, they emerge in their winged form the tyrants of the insect generations in the air ...". Much of his "field work" was carried out in Slovenia, which country he visited several times, and the Preface to his *Salmonia* was written in Ljubljana ("Laybach, Ilyria, Sept. 30, 1828"). His dragonfly work was recently briefly outlined by M. Bedjanič (1999, *Erjavecija* 7: 1-3; see OA 12669).
- (15239) *BEDJANIČ, M.*, 2004. Raziskave favne kačjih pastirjev (Odonata) in ravnokrilcev (Orthopteroidea) na "MRT Makole 2003". — [Inquire into the odonate and orthopteroid fauna at the "Youth Field Research Workshop Makole 2003"]. In: S. Štajnbaher, [Ed.], *Mladinski raziskovalni tabor Makole 2003*, pp. 77-98, ZOTKS, Ljubljana, ISBN 961-6243-45-4 (Slovene). — (Koledvorska 21/B, SI-2310 Slovenska Bistrica).
This is the third annual report on the work at this locality in Haloze, Slovenia; for 2001 and 2002, see OA 14367 and 14993, respectively. This time, 28 odon. spp. are reported from 28 localities; 4/8-VIII-2003. The record of Symptetrum meridionale is emphasized.
- (15240) *BEDJANIČ, M.*, 2004. Raziskave ravnokrilcev (Orthopteroidea) in kačjih pastirjev (Odonata) na "MRT Mislinja 2003". — [Inquire into the orthopteroid and odo-

nate fauna at the "Youth Field Research Workshop Mislinja 2003"]. In: S. Štajnbaher, [Ed.], *Mladinski raziskovalni tabor Mislinja 2003*, pp. 71-95, ZOTKS, Ljubljana, ISBN 961-6243-46-2 (Slovene). — (Kolodvorska 21/B, SI-2310 Slovenska Bistrica).

The odon. fauna of southern Carinthia (Slovenia) is relatively well explored (39 spp.), but the region is characterized by the paucity of appropriate odon. habitats. — This is the third annual report on the work at this locality; for 2001 and 2002, see OA 14316 and 14994, respectively. This time, 18 odon. spp. are recorded from 25 localities; 18/23-VIII-2003. The records of *Cordulegaster heros* and *Sympetrum depressiusculum*, and the local breeding of *S. fonscolombii* are highlighted.

in its scope rather unique in N American literature, supplementing marvelously the more taxonomically oriented field guides.

(15244) BETHOUX, O., J. MCBRIDE & C. MAUL, 2004. Surface laser scanning of fossil insect wings. *Palaeontology* 47(1): 13-19. — (First Author: Dept Geol. & Geophys., Yale Univ., P.O. Box 208109, New Haven, CT 06520-8109, USA).

Primary homologization of wing venation is of crucial importance in taxonomic studies of fossil and extant insects, with implications for large-scale phylogenies. Homologization is usually based on relative relief of veins (with an insect ground plan of alternating concave and convex vein sectors). However, this method has led to divergent interpretations, notably because vein relief can be attenuated in fossil material, or because wings were originally flat. In order to interpret better vein relief in fossil insect wings, the application of non-contact laser scanning was tested. This method enables high resolution 3-dimensional data visualization of a surface, and produces high quality images of fossil insect wings. These images facilitate and improve interpretation of the homologization of wing venation. In addition, because the surface information is digitised in 3 axes (X, Y, Z), the data may be processed for a wide range of surface characteristics, and may be easily and distributed electronically. Finally, this method permits users to reconstruct accurately the fossils, and opens the field of biomechanical interpretation using numerical modelling methods. — In the present study, 5 spp. of different Upper Permian and Upper Carboniferous orders were examined, incl. *Epilestes gallica* from the Upper Carboniferous of Commentry, France.

(15245) BRACHYTRON (ISSN 1386-3460), Vol. 7, No. 2 (dated Dec. 2003; published May 2004). (Dutch, with Engl. s's). — (c/o R. Manger, Stoepveldsingel 55, NL-9403 SM Assen).

Heikoop, J.E., L.B. Sparrius & W. Revet: Dragonfly and vascular plant diversity along ecologically designed ditch banks in Gouda (pp. 35-42); — *Kuijper, W.J.*: The development of the dragonfly fauna of a new small dune lake in the Amsterdamse Waterleidingduinen (Noordwijk, province of Zuid-Holland): history and period 1999-2002 (pp. 43-51); — *Dutmer, S.G.*: Dragonflies in the Gronings-Drentse veenkolonien around 1970 (pp. 52-56); — About a population of *Aeshna viridis* in the veenkolonien and a description of two twilight flights (pp. 57-59); — *Book review* (pp. 60-62; by *S.G. Dutmer*).

(15246) BUCZYŃSKI, P., 2004. [Book review] *Strekozy*

(15241) BEDJANIČ, M. & A. ŠALAMUN, 2004. Dragonflies of the Slovenian Alpine world. In: T. Trilar et al., *Nature of Slovenia: The Alps*, p. 90-93, Slovenian Mus. Nat. Hist., Ljubljana, ISBN 961-6367-00-9. — (First Author: Kolodvorska 21/B, SI-2310 Slovenska Bistrica). A concise and well-balanced presentation of the highlights of the dragonfly world (spp. and their habitats) in the Julian Alps, Karavanke and the Kamniško-Savinjske Alps.

(15242) BEDJANIČ, Mojca & M. BEDJANIČ, 2004. *Spomeniki narave: Ravne na Koroškem*. — [Nature monuments: Ravne-na-Koroškem]. Občina Ravne-na-Koroškem. 8 pp. (fold. brochure). (Slovene). — (Kolodvorska 21/B, SI-2310 Slovenska Bistrica). *Cordulegaster bidentata* is mentioned as a common sp. in the upper course of the Jamniški Stream, Ravne-na-Koroškem, S Carinthia, Slovenia.

(15243) BERGER, C., 2004. *Dragonflies*. Stackpole Books, Mechanicsburg/PA. xii+124 pp. Softcover (15.0x22.8 cm). ISBN 0-8117-2971-0. Price: US \$ 19.95 / € 23.39 net. — (Publishers: 5067 Ritter Rd, Mechanicsburg, PA 17055, USA). Bringing species accounts of merely 27 (mostly E American) spp., this is not a field guide, but rather an attractive and easy to read introduction into odon. biology. The titles of the chapters are: "Jeweled acrobats" (pp. 1-6; odon. characteristics and adult and larval morphology); "A year in the life of a dragonfly" (pp. 7-19); "Understanding dragonfly behavior" (pp. 20-52); "Species identification" (pp. 53-104; incl. species accounts of 4 Zygopt. and 23 Anisopt. spp.); "Watching dragonflies" (p. 105-111); and "attracting dragonflies to your backyard" (pp. 112-117). Lists of some handbooks, field guides, dragonfly organisations, state Odonata surveys, useful websites, etc. are appended. — This is a very useful and impressive work;

- (Odonata) Ukrainy, by S.N. Gorb, R.S. Pavlyuk & Z. Spuris. *Wiad. ent.* 22(1): 18. (Pol.). — (Inst. Zool., Univ. Lublin, Akademicka 19, PO-20-033 Lublin).
An informative review of the work described in OA 14160.
- (15247) BUCZYNSKI, P., E. SERAFIN & A. PTASZYN-SKA, [Eds], 2004. *Badania ważek, chrząszczy i chrząskó w na obszarach chronionych*. — [Research on dragonflies, beetles and caddisflies in nature reserves]. Mantis, Olsztyn. 42 pp. ISBN 83-918125-4-5. (Most papers in Polish, all with Engl. titles).
Abstracts of papers, presented at a symposium (Urszulin, 12-23 May 2004), considered also as the 2nd Polish Odonatol. Symp. (For the 1st Symp., see OA 12033). — [Odon. papers:] Bernard, R.: Myths and reality: an evaluation of the Polish population of selected dragonfly species (Odonata), protected or considered as rare in Poland against their situation in Europe (pp. 6-7); — Buczyński, P.: Dragonflies of the Poleski National Park and its protection zone: new data and the recapitulation of studies conducted in the years 1985-2003 (p. 9); — Buczyński, P. & G. Torczyński: The importance of national parks for dragonfly protection in Poland (p. 10); — Dolný, A., A. Misztal & J. Parusel: Dragonflies of selected nature reserves and areas proposed for protection in the Śląsk Opole voivodships (pp. 12-13); — Dyatlova, O.: Specific features of intra species variability of the damselfly *Ischnura elegans* (v.d.Linden) in Lower Danube (p. 13); — Mielewczyk, S.: To rescue the entomofauna of Toporowe ponds in the Tatra National Park (p. 17); — Rychla, A.: Dragonflies of postexcavation reservoirs in the landscape parks "Gäblenzer Restseegebiet" and "Braunsteich", NE Saxony, Germany (pp. 18-19); — Torczyński, G.: Forms of dragonfly (Odonata) succession in the valley of the Grabia river (pp. 21-22); — The occurring and habitat requirements of Gomphidae (Odonata) in central Poland (p. 22); — Wendzonka, J.: Dragonflies (Odonata) of lobelian lakes in the Kaszub region (p. 23); — Buczyński, P. & A. Kasjaniuk: Dragonflies (Odonata) of the nature reserve "Magazyn" (pp. 24-25); — Dolný, A. & P. Drozd: The indexes of diversity in environmental protection: Odonata model (pp. 25-26); — Gronowski, T.: Dragonflies (Odonata) of the nature reserve "Lake Luknjano" (p. 27); — Khrokalo, L.: Dragonflies (Odonata) of Desnyans'ko-Starogutsky National Natural Park, Ukraine (p. 28); — Matushkina, N.: Conservation of Chalcolestes (Odonata: Lestidae) in East Europe: problems and possibility of cooperation (p. 30); — Mrowinski, P. & A. Zawal: The situation of dragonflies (Odonata) in the Barlinecko-Gorzowski Landscape Park and the attempt to show its changes in the last 70 years (p. 30); — Michonowski, G.: Preliminary results of studies on dragonflies in the Iłski Landscape Park (p. 31); — Szymańska, U., P. Buczyński & S. Czachorowski: Dragonflies (Odonata) and caddisflies (Trichoptera) of the river Pasleka in the zone of influence of the water power station "Kasztanowo" (p. 34); — Szymański, J., J. Siciński & G. Torczyński: The variability of wings in *Calopteryx splendens* (Harris, 1782) in Poland (p. 35); — Tatarkiewicz, D.: Emergence of *Libellula fulva* O.F. Müller, 1764 (Odonata: Libellulidae) (p. 36); — Torczyński, G.: Dragonflies of urban areas Odonata of the Józef Piłsudski Park in Łódź (p. 37); — Torczyński, G., R. Jaskuła, J. Kalisiak, J. Szymański, K. Pabis & R. Chmara: Selected insect groups of the Zaborski Landscape Park (pp. 37-38); — Wendzonka, J.: *Aeshna subarctica elisabethae* Djak. in Polish lobelian lakes (p. 38); — Venation density and the systematics of Polish *Aeshnida* species (p. 39).
- (15248) BUCZYNSKI, P. & A. ZAWAL, 2004. New data about the occurrence of protected dragonflies Odonata in north-western Poland. *Chrońmy Przyr. ojcz.* 60(1): 53-66. (Pol., with Engl. s.). — (First Author: Inst. Zool., Univ. Lublin, Akademicka 19, PO-20-033 Lublin).
New data (1998-2001) on the occurrence of *Aeshna viridis*, *Leucorrhinia albifrons*, *L. caudalis* and *L. pectoralis* are presented. *L. albifrons* and *L. pectoralis* are relatively common in NW Poland, whereas the other 2 spp. are known from a few localities only. The legal status of the 4 spp. is outlined, and a strict protection is advocated.
- (15249) BULLETIN OF AMERICAN ODONATOLOGY (ISSN 1061-3781), Vol. 8, No. 1 (5 Apr. 2004). — (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).
Donnelly, T.W.: Distribution of North American Odonata, 2: Macromiidae, Corduliidae and Libellulidae (pp. 1-32; continuation of the work as listed in OA 15048).
- (15250) CATLING, P.M., C.D. JONES & P. PRATT, [Eds], 2004. *Ontario Odonata*, Vol. 4 (including observations for the year 2002). Toronto Entomologists' Assoc., Toronto. iv+216 pp. Softcover (21.1×27.2 cm), ISBN 0-921631-27-8. Price: US \$ 25.- net. — (Orders to: A.J. Hanks, 34 Seaton Dr., Aurora, ON, L4G 2K1, CA).
Bracken, B. & C. Lewis: First records and emergence of *Sympetrum corruptum* in Prescott-Russell county (pp. 1-3); — Cook, J.: Notable records of Emeralds (*Somatoclora* spp.) from Leeds-Grenville, eastern Ontario (p. 4); — Catling, P.M.: Another record of zebra mussel attached to an exuvium of *Epitheca princeps*, and infer-

- ences-of effect (p. 5); — *Bree, D.*: Additional records of *Cordulegaster obliqua* in Ontario (pp. 6-8); — *Catling, P.M.*: *Anax junius* nymphs overwintering in eastern Ontario (pp. 9-10); — *Pratt, P.D. & S.M. Paiero*: *Archilestes grandis* (Rambur) (Odonata: Lestidae), new to Canada (pp. 11-12); — *Catling, P.M.*: Monitoring dragonflies using exuviae from under bridges (pp. 13-14); — Rapid recovery of Odonata populations at a completely dried up pond (pp. 15-17); — *Lestes australis* in Ontario (pp. 18-22); — *Jones, C.D.*: Ontario Odonata records through the years (pp. 23-27); — *Catling, P.M.*: A preliminary study of dragonflies at eastern Ontario sewage lagoons in relation to water quality (pp. 28-32); — *Bree, D.*: Significant odonate observations from Petroglyphs Provincial Park and area in 2002 (pp. 33-37); — *Oldham, M.J. & K.E. Brodribb*: Notes on *Hetaerina titia* in Ontario (pp. 38-40); — *Catling, P.M., C.D. Jones & P. Pratt*: Introduction to the 2002 Ontario Odonata Summary records (pp. 41-193); — *Corrections, Recent literature, etc.* (pp. 194-216).
- (15251) CHEESMAN, O.D. & J.W. PHILLIPS, 2004. Invertebrate conservation in the UK: the role of Invertebrate Link (JCCBI) and the British Entomological and Natural History Society, *Br. J. Ent. nat. Hist.* 17(1): 10-14. — (First Author: CABI Bioscience, Bakeham Lane, Egham, Surrey, TW20 9TY, UK).
The involvement of the British Entomological and Natural History Society with Invertebrate Link and their current contribution to invertebrate conservation in the UK are reviewed. Various documents pertaining to the Odon. are listed.
- (15252) COSTA, J.M., L.O.I. DE SOUZA & B. BOTELHO OLDRINI, 2004. Chave para identificação das famílias e gêneros das larvas conhecidas de Odonata do Brasil: comentários e registros bibliográficos (Insecta, Odonata). *Publções avuls-Mus. Nac. Rio de J.* 99: 1-42. (Port., with Engl. s.). — (Depto Ent., Mus. Nac., Quinta da Boa Vista, BR-20940-040 Rio de Janeiro, RJ).
An illustrated family and genera key to the known Brazilian odon. larvae, with annotations on the occurrence, comments and an exhaustive bibliography.
- (15253) DAVIDS, C., 2004. Parasitisme bij watermijten. — Parasitism in water mites. *Ent. Ber., Amst.* 64(2): 51-58. (Dutch, with Engl. s.). — (Aquatische Ecologie, Univ. Amsterdam, P.O. Box 94084, NL-1090 GB Amsterdam).
A concise review, with some references to the Odon.
- (15254) DÉVAI, G., 2004. Comment on the proposed conservation of usage of the specific names *Libellula aenea* Linnaeus, 1758 (currently *Cordulia aenea*) and *L. flavomaculata* Vander Linden, 1825 (currently *Somatochlora flavomaculata*; Insecta, Odonata) by the replacement of the lectotype of *L. aenea* with a newly designated lectotype. *Bull. zool. Nomencl.* 61(1): 42. — (c/o Am Liebfrauenbusch 3, D-26655 Westerstede).
The Author agrees with the proposal as outlined in OA 15129.
- (15255) DIGEST OF JAPANESE ODONATOLOGICAL SHORT COMMUNICATIONS, No. 15 (May 2004). — Compiled, translated and produced by N. Ishizawa (1644-15, Yamaguchi, Tokorozawa, Saitama, 359-1145, JA).
Naraoka, H.: An early emergence of *Sympetrum frequens* from Aomori city in April (p. 1); — *Kano, K.*: Male-male formation in *Boyeria maclachlani* (Selys) (p. 1); — Copulating flight of a male *Boyeria maclachlani* (Selys) with an inactive female (p. 2); — An attempt of interspecific tandem formation with a female of *Planaeschna milnei* (Selys) by a male of *Boyeria maclachlani* (Selys) (p. 2); — *Takasaki, Y.*: *Ceragrion nipponicum* Asahina from Aomori prefecture, 2 (pp. 2-4); — *Naraoka, H.*: Changes of the body colour of *Nehalennia speciosa* (Coenagrionidae: Odonata) (pp. 4-6; col. fig. incl.).
- (15256) DIJKSTRA, K., 2004. Odonates (libellules et demoiselles). In: M. Louette, D. Meirte & R. Jocué, [Eds], *La faune terrestre de l'archipel des Comores* [Stud. afrotrop. Zool. 293], pp. 251-252, 426 (references), Mus. Roy. Afr. Gent, Tervuren, ISBN 90-75894-63-5. — (Gortestraat 11, NL-2311 MS Leiden).
A brief outline of the odon. world of the Comores (30 spp.), with emphasis on the biogeographic composition of the fauna. A list of spp. is not provided.
- (15257) DOBRAVEC, J., M. FAJDIGA, A. MENCINGER & T. MENEGALJIA, 2004. Rised bogs. In: T. Trilar et al., *Nature of Slovenia: The Alps*, pp. 86-89, Slovenian Mus. Nat. Hist., Ljubljana, ISBN 961-6367-00-9. — (First Author: Triglav Natn. Park, Kidričeva 2, SI-4260 Bled).
In Slovenia, rised bogs (syn.: peat bogs) are restricted to higher hilly regions (Pohorje, E Karavanke, Pokljuka, Jelovica) and reach here the SE boundary of their European distribution. Reference is made to *Somatochlora arctica* and *Leucorrhinia dubia* that are in Slovenia peculiar to these habitats.
- (15258) FLECK, G., 2004. La larve du genre *Cyanothemis* Ris, 1915 (Odonata: Anisoptera: Libellulidae):

- conséquences phylogénétiques. *Annls Soc. ent. Fr.* (N.S.) 40(1): 51-58. (With Engl. s.). — (40 rue de Benfeld, F-67100 Strasbourg).
- The larva of *C. simpsoni* (♂, Gabon, VII-2002) is described and illustrated for the first time. The comparison of the larva and adult with those of *Lepthemis* and *Rhodothemis* suggests that these 3 genera are closely related. *Acisoma* has to be considered as belonging to the clade (Cyanothemis+Lepthemis+Rhodothemis). Nannophya and Nannothemis, put traditionally into Brachydiplactinae rather than into the Sympetrinae, could represent the adelphotaxa of the (Acisoma+Cyanothemis+Lepthemis+Rhodothemis) clade.
- (15259) FLECK, G., G. BECHLY, X. MARTINEZ-DEL-CLÓS, E.A. JARZEMBOWSKI & A. NEL, 2004. A revision of the Upper Jurassic-Lower Cretaceous dragonfly family Tarsophlebiidae, with a discussion on the phylogenetic positions of the Tarsophlebiidae and Sieblosiidae (Insecta, Odonatoptera, Panodonata). *Geodiversitas* 26(1): 33-60. (With Fr. s.). — (Last Author: Lab. Ent., Mus. Natn. Hist. Nat., 45 rue Buffon, F-75005 Paris).
- The type sp. of the type genus *Tarsophlebia* Hagen, 1866, *T. eximia* (Hagen, 1862), from the Upper Jurassic of Solenhofen, is redescribed, incl. important new information on its head, legs, wings, anal appendages and ♂ secondary genitalia. The type specimen of *Tarsophlebiopsis mayi* Tillyard, 1923 is regarded as an aberrant or unusually preserved *Tarsophlebia eximia*. *Tarsophlebia minor* sp. n., *Taurophlebia anglicana* sp. n., *T. mongolica* sp. n., and *T. vitimensis* sp. n. are described. *Tarsophlebia neckini* Martynov, 1927 is transferred to *Turanophlebia*. The phylogenetic relationships of the Mesozoic Tarsophlebiidae are discussed on the basis of new body and venation characters. The present analysis supports a rather derived position for the Tarsophlebiidae, as a sister group of the Epiproctophora rather than of (Zygoptera+Epiproctophora). The Oligo-Miocene Sieblosiidae seems to be more closely related to the Epiproctophora than to the Zygoptera. The significance of the tarsophlebiid ♂ secondary genital apparatus for the reconstruction of the evolution of odon. copulation is discussed.
- (15260) GEENE, P. & J. GOEDBLOED, 2004. Een libellenatlas voor Zeeland. — [A Zeeland province dragonfly atlas project]. *Zeeuwse Prikkebeen* 12(1): 6-7. (Dutch). — (First Author: Halve Maanstraat 57, NL-4356 BN Oostkapelle).
- A detailed description of the project, scheduled to be completed by ca 2006; — the Netherlands.
- (15261) GOMPHUS. Mededelingsblad van de belgische libellenonderzoekers — Bulletin de liaison des odonatologues belges (ISSN 0772-4691), Vol. 19, No. 2 (dated Dec. 2003, published May 2004). (Dutch & Fr., mostly with Engl. s's). — (c/o G. De Knijf, Matrouwstraat 10, B-9661 Brakel-Parike).
- Tailly, M.: Editorial (pp. 49-50); — Vanreusel, W. & J. Cortens: Exceptionally early recordings of *Cordulegaster boltonii* (pp. 51-54); — Goffart, P. & V. Fichet: Compte-rendu des observations d'espèces prioritaires d'odonates en Wallonie durant la saison 2002, dans le cadre du programme d'Inventaire et Surveillance de la Biodiversité (ISB) (pp. 55-64); — De Knijf, G. & H. Demolder: *Aeshna isosceles* in Wallonia: first observation since 1993 (pp. 65-71); — Meuris, L.: *Brachytrogon pratense* back in the Davailei after a long absence (pp. 73-78); — Van de Meuter, F.: 150 years of history of Odonata in De Maten (Genk, Belgium) (pp. 79-89); — De Knijf, G.: Compte-rendu de l'excursion vers le "Limburgse Hoge Kempen" ... (pp. 90-92); — *Excursions* 2004 (pp. 93-95).
- (15262) GRONERT, R., 2004. Wordt zoete juffer een (brak)zoete juffer. — [A note on *Pyrrosoma nymphula* in the coastal area, the Netherlands]. *Windbreker* 2004 (March): 32. (Dutch). — (Plein 1945, No. 9, NL-1755 NH Petten).
- A record from Petten (5-VI-2003), with a note on the recent appearance of the sp. in the Netherlands coastal region, from Zeeland to Den Helder.
- (15263) INTERNATIONAL JOURNAL OF ODONATOLOGY (ISSN 1388-7890), Vol. 7, No. 1 (1 Apr. 2004). — (Orders to: Ms L. Averil, 49 James Rd, Kidderminster, Worcestershire, DY10 2TR, UK).
- Jödicke, R.: Editorial (pp. 1-2); — Cook, C. & E.L. Lauder milk: *Stylogomphus sigmastylus* sp. nov., a new North American dragonfly previously confused with *S. albistylus* (Odonata: Gomphidae) (pp. 3-24); — Corbet, P.S.: Ballistic defaecation by anisopteran larvae (Odonata): a way to increase foraging success? (pp. 25-32); — Hawking, J., F. Suhling, K. Wilson, G. Theischinger & G. Reels: Underwater and epilithic oviposition by Australian *Aeshnidae* (Odonata) (pp. 33-36); — Jödicke, R., P. Langhoff & B. Misof: The species-group taxa in the Holarctic genus *Cordulia*: a study in nomenclature and genetic differentiation (Odonata: Corduliidae) (pp. 37-52); — McMillan, V.E. & R.M. Arnold: Oviposition behavior and substrate utilization by *Lestes* congener (Odonata: Lestidae) (pp. 53-63); — Rehfeldt, G.: Diel pattern of activity, mating and flight behaviour in *Onychogomphus uncatatus* (Odonata: Gomphidae) (pp. 65-71); — Suhling,

- F., C. Schütte & O. Müller: *Nesciothemis farinosa*: description of the final stadium larva (Odonata: Libellulidae) (pp. 73-78); — *Tennesen, K.J.*: *Acanthagrion aepiolum* sp. nov. from South America (Odonata: Coenagrionidae) (pp. 79-86); — *Watts, P.C., D.J. Thompson & S.J. Kemp*: Cross species amplification of microsatellite loci in some European zygopteran species (Odonata: Coenagrionidae) (pp. 87-96); — *Worthen, W.B., S. Gregory, J. Felten & M.J. Hutton*: Larval habitat associations of *Progomphus obscurus* at two spatial scales (Odonata: Gomphidae) (pp. 97-109).
- (15264) JOHANSSON, F. & F. SUHLING, 2004. Behaviour and growth of dragonfly larvae along a permanent to temporary water habitat gradient. *Ecol. Ent.* 29(2): 196-202. — (First Author: Dept Ecol. & Environ. Sci., Umeå Univ., S-90187 Umeå).
- Freshwaters form a gradient from small temporary waters to large permanent waters. Identifying and examining traits that restrict the distribution of spp. along this gradient are crucial to the understanding of community structure in these habitats. Differences in traits important for growth and survival were studied in a series of laboratory experiments, using 2 pairs of spp. that coexist in the Namibian semi-desert. One pair (*Pantala flavescens*, *Sympetrum fonscolombii*) was from the most temporary part of the water permanence gradient, and the other (*Crocotthemis erythraea*, *Trithemis kirbyi*) from an intermediate part of the gradient. As predicted, activity, capture rate, and growth rate were significantly greater in the 2 temporary water spp. Species differences in microhabitat selection were not related to the species habitat origin. Cannibalism did not differ between the spp. The results support the hypothesis that selection has favoured combination of trait values and that these traits are important for a successful life in temporary and permanent waters.
- (15265) JOURNAL OF THE BRITISH DRAGONFLY SOCIETY (ISSN none), Vol. 20, No. 1 (Apr. 2004). — (c/o Dr W.H. Wain, Haywain, Hollywater Rd, Bordon, Hants, GU35 0AD, UK).
- Cham, S.*: Dragonfly predation by European hornets *Vespa crabro* (L.) (Hymenoptera, Vespidae) (pp. 1-3); — *Pickness, B.P.*: Rapid colonization of a newly dug pond on a Polish heathland (p. 4); — *Parr, A.J., G. de Kniiff & M. Wasscher*: Recent appearances of the Lesser Emperor *Anax parthenope* (Selys) in north-western Europe (pp. 5-16); — *Thompson, D.J. & J.R. Rouquette*: Variation in the "mercury mark" of the Southern Damselfly *Coenagrion mercuriale* (Charpentier) in Britain (pp. 17-21); — *Emery, C. & L. Emery*: The domestic cat: a regular dragonfly predator? (p. 22); — *Smith, P.G.*: Dragonfly population of peat-bog pools in north-east Scotland (pp. 23-30); — *Cham, S.*: Observations on an inland population of the Small Red-eyed Damselfly *Erythromma viridulum* (Charpentier) with notes on the first discovery of larvae in Britain (pp. 31-34); — *Thompson, D.J.*: Honest signals and female damselflies (pp. 35-36).
- (15266) KHROKALO, L.A., 2004. *Vydovyy sklad ta ekologichni osoblyvosti babok (Insecta, Odonata) Pivnichnogo Shodu Ukrainy.* — *Species composition and ecological peculiarities of dragonflies (Insecta, Odonata) of the northeastern Ukraine.* Autoref. Dys. Kand. Biol. Nauk, Kyiv. Nac. Univ. Tarasa Shevchenka, Kyiv. 20 pp. (Ukrain., with Russ. & Engl. s's). — (Dept Zool., Fac. Biol., Kyiv Natn. Taras Shevchenko Univ., Volodymyrska 64, UKR-01033 Kyiv).
- This is the first comprehensive work on the odon. fauna (62 spp) of the NE Ukraine. *Chalcolestes parvidens* and *Sympetrum depressiusculum* are for the first time reported for the region, and the northernmost and the easternmost localities in the Ukraine are recorded for *Crocotthemis erythraea* and *Sympetrum pedemontanum*, respectively. The spp. are divided into 6 phenological groups, for 12 spp. the precise phenology is stated. Much attention is given to habitat ecology; in the riverine habitats, species diversity is the greatest. Some amendments of the Ukrainian Red Data Book are proposed, viz.: (1) *Coenagrion lunulatum*, *Nehalennia speciosa*, *Ophiogomphus cecilia*, *Cordulegaster bidentata* and *Leucorrhinia albifrons* should be added; while (2) *Calopteryx virgo* and *Anax imperator* are not at risk, and *Coenagrion mercuriale* does not occur in the Ukraine, therefore these spp. should be deleted from the list. — This is solely a printed summary of the original dissertation (165+7 pp., 4 tabs, 16 figs incl.), which is not available for abstracting.
- (15267) LAM, E., 2004. *Damselflies of the Northeast.* Biodiversity Books, Forest Hills/NY. 95 pp. Softcover (13.7x21.4 cm). ISBN 0-9754015-0-5. Price: € 34.92 net.
- A welcome addition to the recently rapidly increasing N American commercially available literature, this is a pocket-size field guide for identification of *Zygoptera*, covering 69 spp., from E Canada to Virginia, with emphasis on the excellent col. illustrations, showing the diagnostic features. For each sp. are also provided brief statements on the habitat and habits, and a range map to the county level. The text is concise throughout, and the information supplied will enable an easy and reliable identification and separation of similar taxa. The illustrations were prepared

with much skill and stand witness to Author's profound experience. — A good work, warmly recommended for use in the field.

- (15268) LI, L.-H., 2004. A method of preserving insect specimens in a sterilized moist chamber. *Ent. Knowledge* 40(5): 472-483. (Chin., with Engl. s.). — (Dept Biol., Sichuan Teachers Coll., Nanchong 607002, P.R. China). The method is described. The specimens remain soft, hence the risk of their damaging is reduced. In the abstract, no reference is made to the odon.
- (15269) *LIBELLULA* (SUPPL.) (ISSN 0723-6514), Vol. 5 (March, 2004): *Studies on the dragonfly fauna of Turkey*. 200 pp. — (c/o Ms I. Schrimpf, Heimbühlstr. 32, D-72768 Reutlingen).
Boudot, J.-P., V.J. Kalkman, A. Kop, G.J. van Pelt & M. Wasscher: Editorial (pp. 1-2); — *van Pelt, G.J.*: New records of dragonflies from Turkey (Odonata) (pp. 3-38); — *Kalkman, V.J., A. Kop, M. Wasscher & G.J. van Pelt*: The dragonflies of the surroundings of Lake Köyceğiz and the River Esen, Muğla province, SW Turkey (Odonata) (pp. 39-63); — *Kalkman, V.J., W. Lopau & G.J. van Pelt*: Hitherto unpublished records of dragonflies from Turkey (Odonata) (pp. 65-166); — *van Pelt, G.J. & V.J. Kalkman*: Research on dragonflies in Turkey: present status and future aims (Odonata) (pp. 167-192); — *Colour photographs* (pp. 193-200).
- (15270) LOPAU, W., 2004. Die Libellenfauna der Kykladen, Griechenland. *Naturk. Reiseber.* 20: 1-59. — (Kuhstedtermoor 26, D-27442 Gnarrenburg).
 This is a monograph on the odon. fauna (29 spp.) of the Cyclades archipelago, Greece. The habitats are described, historical records are traced from 1863, the occurrence of each sp. is outlined and mapped, field notes and other annotations are offered, and an exhaustive regional bibliography is provided.
- (15271) MANGER, R. & G. ABBINGH, 2004. *Libellen in Drenthe: verspreidingsatlas 1995-2003*. — [*Dragonflies in the province of Drenthe, the Netherlands: distribution atlas 1995-2003*]. Libellenwerkgroep Drenthe, Assen. 120 pp. Softcover (14.4x20.5 cm). ISBN none. (Dutch). — (Publisher: Muddegoorn 78, NL-9403 NK Assen).
 The well-produced booklet covers 46 spp., with distribution maps, descriptions of their habitats and habits, adult phenology graphs, and statements on their local status and Red List classification. The work is intended to serve as a reference for future inventarisations and mapping.
- (15272) *THE MIGRANT SKIMMER*. Bulletin of the Dragonfly Project (ISSN none), No. 2 (not numbered; May 2004). — (c/o Dr R. Mackenzie Dodds, East Ardrasgair, Fortingall by Aberfeldy, Perthshire, PH15 2LN, UK).
 On 4 pp., a brief report on the 2003 activities, and a schedule for 2004. Most activities were carried out at the Wicken Fen National Trust Nature Reserve nr Cambridge and included 12 safaris and 4 one-day courses. For more information, see <http://www.dragonflyproject.org.uk>
- (15273) NELSON, B. & R. THOMPSON, 2004. *The natural history of Ireland's dragonflies*. Natn. Mus.'s & Galleries Northern Ireland, Ulster Mus. & Bot. Gard., Belfast. x+454 pp. Hardcover (22.5x28.0 cm; 2.5 kg). ISBN 0-900761-45-8. Price: UK £45.- net. — (Distributor: Ulster Mus., Belfast, Northern Ireland, BT9 5AB, UK).
 This is a splendid treatment of all what is known on the odon. fauna of the island of Ireland. Out of the 32 spp. on the Irish list, 24 spp. have been confirmed as breeding, 5 spp. are known from a single record, 3 spp. are migrant, 3 spp. have not been fully authenticated, and *Sympetrum nigrescens* is considered to represent a form of *S. striolatum*. In their comprehensive study, the Authors combine their profound knowledge and research based on 20 yr of field experience with the information gleaned from the extensive 4-yr study carried out by the DragonflyIreland Project. The result is a book that ranks, without any reservation, among the most excellent works on a national odon. fauna. The 12 chapters are titled: "Biology and ecology of Irish odonates" (pp. 1-20); "History of the study of Irish odonates" (pp. 21-34); "Aims and methodology of DragonflyIreland" (pp. 35-42); "Biogeography and checklist of Irish odonates" (pp. 43-50); "Results: summary and interpretation" (pp. 51-62); "Species accounts" (pp. 63-336); "Habitats of Irish odonates" (pp. 337-354); "Habitat gallery" (pp. 355-414); "Conservation" (pp. 415-418); "Studying odonates in the field" (pp. 419-426); "Where to see Irish odonates" (pp. 427-430); and "Photography" (pp. 431-436). Bibliography, Appendices and Index conclude the work, in which particular emphasis is placed on the odon. habitats. The odonotol. history of Ireland is traced from 1832; its giants are: (the little known but crucially important) Mary Ball (1812-1898), Cynthia Longfield (1896-1991) and Niall MacNeill (1899-1969), whose lives and work are concisely outlined, assessed and documented with some highly interesting photographs. The detailed species accounts are systematically organised into the following sections: "Description", "Similar species", "Behaviour", "Life cycle", "Habitat", "History in Ireland", "Distribution", and "Interpretation and trends". These are certainly more than of merely national interest.

Throughout the book, each sentence is highly informative, the style and language present a fascinating reading. There are more than 300 outstanding col. photographs of adults, larvae, habitats etc. Distribution maps are also presented for all spp. Aside of its regional scope, the style of the treatment will be of much interest to professional and non-professional odon. students anywhere in the world.

- (15274) *NIEUWSBRIEF VAN DE NEDERLANDSE VERENIGING VOOR LIBELLENSTUDIE*. (ISSN 1387-4470), Vol. 8, No. 2 (June 2004). (Dutch). — (c/o R. Manger, Stoepveldsingel 55, NL-9403 SM Assen). [Some highlights:] *Goudsmit, K. & M. Wasscher*: The Netherlands smallest dragonfly? (pp. 5-6; *Sympetrum danae* ♀, Bladel, 2-VIII-2003; lengths in mm: total 21, abd. 13, fw. 20, hw. 19); — *Wasscher, M.*: Important dragonfly observations and populations in, and in vicinity of the Netherlands, 1999-2004 (pp. 7-9); — *Manger, R.*: Does *Sympetrum paedisca* behave as migratory birds (pp. 10-12); — *Wasscher, M.*: New *Coenagrion armatum* population at the Weerribben (p. 15); — *Grotenhuis, H.*: *Hemianax ephippiger* migration on Lanzarote, Canary Islands (p. 17; 17-II-2004).
- (15275) *ODONATOLOGICAL LIBRARY NEWS*, Osaka (ISSN none), No. 33 (7 Dec. 2003), No. 34 (28 March 2004). Published by Kansai Research Group of Odonatology. (Jap., with Engl. title). — (c/o K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545-0004, JA). The 2 issues (26 pp.) contain 494 numbered bibliographic entries (nos 8797-9291) of publications by Japanese authors, published mostly 1978-2003.
- (15276) *PETRULEVICIUS, J.F. & A. NEL*, 2004. A new damselfly family from the Upper Palaeocene of Argentina. *Palaeontology* 47(1): 109-116. — (Lab. Ent., Mus. Natn. Hist. Nat., 45 rue Buffon, F-75005 Paris). *Latibasaliidae* fam. n. (Zygoptera: Caloptera: Eucloptera, Amphipterygida: Amphipterygoidea), based on *Latibasalia elongata* gen. n., sp. n., from the Maiz-Gordo Formation, NW Argentina, is established. Its phylogenetic relationships within the clade Eucloptera are discussed. Within Amphipterygoidea, *Latibasaliidae* could be closely related to *Pseudolestidae*, or to the "thaumatoneurid" genera *Petrolestes* and *Congqingia*, because they share the absence of secondary antenodal crossveins of first and second rows and the absence of antesubnodal crossveins. These characters could be potential synapomorphies of these taxa, but they are somewhat homoplastic within the Zygoptera.
- (15277) *RINEHART, S.C.*, 2004. *Eliza and the dragonfly*. Dawn Publications, Nevada City/CA. Not paged (32 pp.). Softcover (22.5x27.5 cm). ISBN 1-58469-060-7. Prices: US \$ 8.95 / € 13.44 net). — (Publishers: 12402 Bitney Springs Rd, Nevada City, CA 95959, USA). Aimed at the children 4-10 yr of age, and designed to explain the life of a typical dragonfly (*Anax*), the objective of the book seems to be the development of the attitudes towards dragonflies rather than the instruction on their life history and behaviour. A simple story, attractively presented and richly illustrated. The final 2 pp. are in the first place directed at the parents, providing some basic "scientific" information on dragonflies, and listing some sources where more information is available.
- (15278) *SHESHURAK, P.N. & L.A. KHROKALO*, 2004. K izucheniyu entomofauny doliny Desny: strekozy (Odonata) Biostacionara NDPU "Lesnoe ozero" i ego okrestnostey (Chernigovskaya obl. Ukraina). — [Contribution to the knowledge of the insect fauna of the Desna Valley: dragonflies (Odonata) of the Biological Station of the Nizhin State Pedagogical University, "Lesnoe ozero", and its vicinity (Chernigiv distr. the Ukraine)]. *Prirodnicchi nauki na mezhi stolit'*, pp. 114-117, Nizhin St. Pedag. Univ., Nizhin. (Russ.). — (Second Author: Dept Zool., Kiev Natn. Univ., Volodimirska 64, UKR-01033 Kyiv). The station is situated in the Borznyansk parish, in the transitional area between the "Mixed Forest" and the "Forest-Steppe" zones, on the banks of Lake Trubin, ca 4 km off the Desna R., the Ukraine. The region is characterised by a high variety of odon. habitats. Between 1998-2002, 43 spp. were recorded and are listed here, pointing out the particular habitats where they occur.
- (15279) *SMALLSHIRE, D. & A. SWASH*, 2004. *Britain's dragonflies: a guide to the identification of the damselflies and dragonflies of Great Britain and Ireland*. Wild Guides, Old Basing. 168 pp. Hardcover (15.0x21.5 cm). ISBN 1-903657-04-0. Price: UK £ 15.- / € 27.88. — (Publishers: Parr House, 63 Hatch Lane, Old Basing, Hampshire, RG24 7EB, UK). A comprehensive photographic guide, covering all 57 spp. that have been recorded, as well as 10 potential vagrants. Each species account covers the identification of adults, and includes information on eggs and larvae, behaviour, habitat requirements and population and conservation status. Col. distribution maps and charts summarising the flight periods accompany the text for each breeding sp. Additional illustrated sections summarise the key identification features of adults and larvae, 55 remarkable col.

pls depict typical views of each (adult) sp., showing ♂♂, ♀♀ and immature and other colour forms. These have been produced using the latest digital image technology (applied also in the recent Butterfly Guide of the same Publishers) and include hundreds of images that have never been published previously. — A valuable, very attractive and innovative work, useful to a beginner and to an expert alike.

- (15280) SMIDDY, P., 2004. Some records of rare Odonata species in east Cork and west Waterford: 2002-2003. *Ir. Nat. J.* 27(9): 357. — (Ballykenneally, Ballymacoda, Co. Cork, Eire).

Records of *Anax imperator*, *A. parthenope* and *Aeshna mixta*; — Eire.

- (15281) SWITZER, P.V., 2004. Fighting behavior and prior residency advantage in the territorial dragonfly, *Perithemis tenera*. *Ethol. Ecol. Evol.* 16(1): 71-89. — (Dept Biol. Sci., Eastern Illinois Univ., Charleston, IL 61920, USA).

Many factors, including residency status, body size, age, and energetic reserves, have been implicated as possibly determining the winner in animal contests. In this study, it was investigated which of these factors were correlated with the outcomes of naturally-occurring territorial contests between ♂ *P. tenera*. *Perithemis* contests consists of non-contact interactions and are characterized by a series of distinct stages that represent different levels of escalation. Prior residents did tend to win, but interestingly this residency advantage only occurred in interactions that were not escalated. For both non-escalated and escalated interactions, body size (wing length) did not influence the outcome. Age was correlated with outcome for escalated interactions, with the younger of the pair tending to win. Winning ♂♂ had also spent less time in ♂-♂ interactions both the day of the interaction and during their entire life, suggesting that energy reserves may also affect the outcome of contests. In contrast to escalated interactions, age and time spent in ♂-♂ interactions was not related to the outcome of non-escalated interactions. The difference between the 2 opponents' sizes, ages, and time spent in previous ♂-♂ interactions did not correlate with duration or escalation level of contests. These results suggest that non-escalated interactions may occur when intruders are

simply assessing the quality of the site. Contests that do not escalate, and thus the prior residency advantage, are probably a result of the intruder not challenging for ownership because the value of the territory is too low.

- (15282) VLIEGENTHART, S., 2004. Libellen vangen in de winter? — [Dragonfly catching in the winter?] *Agrion*, *NJN* 49(1): 5-6. (Dutch). — (Author's address not stated).

A note on the past and current occurrence of *Sympecma fusca* and *S. paedisca* in the Netherlands, with an enumeration of the respective habitats, and pointing out the morphological peculiarities for an easy identification in the field.

- (15283) WARRINGTON, S., G. DAVIS & A. WALLINGTON, 2004. The aquatic invertebrate community of Hatfield Forest National Nature Reserve. *Ent. mon. Mag.* 140(1679/1681): 89-96. — (First Author: National Trust, Dairy House, Ickworth, Bury St Edmunds, IP29 5QE, UK).

Includes a list of 9 odon. spp., produced by the 1998-2002 survey; — NW Essex, UK.

- (15284) WELDT, S., 2004. Prispevek k poznavanju kačjih pastirjen osrednjih Slovenskih Goric. — [Contribution to the knowledge of dragonflies of central Slovenske Gorice]. In: S. Štajnbaher, [Ed.], *Mladinski raziskovalni tabor Ščavnica 2003*, pp. 73-77, ZOTKS, Ljubljana, ISBN 961-6243-44-6. (Slovene). — (Delavska 26, SI-2213 Ceršak).

A checklist of 30 spp., without precise localities, 7/13-VII-2003; — Styria, Slovenia. Of interest is the description of an odon. community of the local forest streams.

- (15285) WILLIAMSONIA. Newsletter of the Michigan Odonata Survey (ISSN none), Vol. 8, No. 2 (Apr. 2004). — (c/o Dr M.F. O'Brien, Insect Div., Mus. Zool., Univ. Michigan, Ann Arbor, MI 48109, USA).

O'Brien, M.: 2004 Survey recommendations (pp. 1, 3-4); — *Ross, S.*: Cuban odes (p. 2; some records, incl. *Crocothemis servilia* from Havana); — *O'Brien, M.*: Checklist of Michigan Odonata (pp. 5-6); — *Odonata resources on the Internet* (p. 8).