

ODONATOLOGICAL ABSTRACTS

1980

- (10335) DAVIES, D.A.L., 1980. *How did the Pterosaur soar?* Preliminary draft of an unpublished manuscript, deposited by the Author in the Kiauta Library, on 8 July 1980. 3 pp. – (23 Cedar Court, Hills Rd, Cambridge, CB2 2QJ, UK).
See *Abstracter's Note* in OA 10424.

dejavnosti v prostoru '88, pp. 13-31, ZOTKS, Ljubljana, (Slovene). – (Dept Biol., Univ. Maribor, Koroška 160, SI-62000 Maribor).
Larval *Onychogomphus forcipatus* and *Cordulia aenea* are listed from the rivulet, Styria, Slovenia.

- (10336) GERSTMEIER, W., 1980. *Der aktuelle Kenntnisstand der Wirbellosenkartierung in der Industrieregion 7. ZulassungsArb. Staatsexamen Lehramt Gymn., 1. Zool. Inst. Univ. Erlangen.* 95 pp. – (Author's address unknown).
Contains a checklist of 62 odon. spp. from central Franconia, Bavaria, Germany (pp. 37-49), based on literature records, without any original data.

1990

- (10339) (Anonymous), 1990. The dragonfly gift shop. In: Bell, B., [Ed.], *Here's Harrison*, p. 19, Chamber of Commerce, Harrison Hot Springs, BC. – (Shop: 106-196 Esplanade Ave., Harrison Hot Springs, BC, CA).
A rather detailed commercial advertisement. – (The *Abstracter* is visiting incidentally this peculiar "fantasy shop", located some 150 km E of Vancouver, on the Trans-Canada Hwy. It is offering for sale an amazing variety of dragonfly memorabilia, such as crystal, jewelry, pottery, toys, artistic pictures and sculptures, etc., mostly of North American and European provenience).

1989

- (10337) [CARRUETTE, P. & SUEUR], 1989. Migrations de libellules dans la Somme. *Bull. ann. Parc Marquenterre* 1989: 44-45. – (First Author: Domaine du Marquenterre, F-80120 St Quentin/Tourmont).
Unusually large migrations of *Lestes viridis*, *Aeshna cyarea*, *Sympetrum* sp., *S. sanguineum*, *S. striolatum* and/or *S. vulgatum* are reported (Aug. 14 - Nov. 6, 1988) from the "Parc Ornithologique du marquenterre", France.

- (10340) REINHARDT, R., 1990. Beitrag zur Tagfalterfauna der mitteldalmatischen Adriaküste (Lepidoptera, Papilionoidea). *Nachr. ent. Ver. Apollo, Frankfurt* (NF) 11(2): 113-117. – (Faleska-Meinig-Str. 138, D(O)-9047 Chemnitz).
Platynemis pennipes is recorded from the Krka Waterfalls, and *Orthetrum cancellatum* from Skradin, Dalmatia, Croatia.

- (10338) MARKIČ, M., 1989. Raziskava zoobentosa potoka Ščavnice s posebnim poudarkom na indikatorskih organizmih saprobnosti. – [Inquiry into the zoobenthos of the Ščavnica Stream, with emphasis on the saprobic organisms]. In: A. Papotnik et al., [Eds], *Ekologija in učinki človekove*

1991

- (10341) BRAUCKMANN, C., 1991. Arachniden und Insekten aus dem Namurium von Hagen-Vorhalle (Ober-Karbon, West-Deutschland). *Veröff. Fuhlrott-Mus.* 1: 1-275, frontisp. excl. (With

Engl.s.). – (Fuhlrott-Mus., Auer Schulstr. 20, D-42103 Wuppertal/Elberfeld).

During the last decade more than 80 specimens of arachnids and insects have been collected from the Vorhalle beds (Upper Namurian B, Middle Marsdenian, R2c of the goniatite succession), Ruhr, Germany. These are referable to at least 19 spp., representing the most ancient, nearly completely preserved pterygotes, and are here monographically reviewed, redescribed and illustrated. The assemblage includes 3 odon. spp., viz. *Nemurotypus sippeli*, *Erasipteroides valentini* and *Zessinella siopie*.

- (10342) [CARRUETTE, P.], 1991. Migration des libellules au Parc – automne 1991. *Bull. ann. Parc Marquenterre* 1991: 41. – (Domaine du Marquenterre, F-80120 St Quentin/Tourmont).
Data are presented on the migrations of (mostly) *Sympetrum sanguineum*, in the Marquenterre Park, France (Aug.-Oct., 1991).

1992

- (10343) ASAHINA, S. & T. YAMASAKI, [Eds], 1992. Animals on the earth. Insects. 1. Dragonflies, myflies and others. *Weekly Asahi Encyclop.* 73: ii+32 pp. (Jap., with taxonomic nomenclature). – (First Ed.: Takadanobaba 4-4-24, Shinjuku-ku, Tokyo, 169, JA).

The beautifully illustrated issue contains the following odonatol. articles: *Imadachi, G.*, T. Yamasaki & S. Asahina: Cryptically living apterygotes have an old history, similar to that of the alate mayflies and dragonflies (pp. 8-9); – *Higashi, K.*: Curious copulation of the living creatures in the air: dragonflies (pp. 20-22); – *Miyakawa, K.*: Geographical and seasonal migrations in *Sympetrum frequens* and *Pantala flavescens* (pp. 23-25); – *Arai, Y.*: Dragonfly sanctuary (pp. 26-27); – *Asahina, S.*: Systematic groups in dragonflies (pp. 28-29; 16 spp. shown in exceptionally beautiful portraits).

- (10344) BÖHMER, J. & H. RAHMANN, 1992. *Gewässerversauerung: limnologische Untersuchungen zur Versauerung stehender Gewässer im Nord-schwarzwald unter besonderer Berücksichtigung der Amphibienfauna*. Ecomed, Landsberg am Lech. viii+254 pp. – ISBN 3-609-65870-3. – (Publishers: Justus-von-Liebig Str. 1, D(W)-8910

Landsberg am Lech).

The book deals with the acidification effects on stagnant waters in Black Forest, Germany. It contains a brief odon. section (pp. 190-191), where 13 spp. are considered. Their abundance is shown in relation to the pH of larval habitats, and the occurrence of *Enallagma cyathigerum*, *Pyrrhosoma nymphula* and *Aeshna cyanea* is outlined in some more detail.

- (10345) BRETSCCHKO, G. & J. WARINGER, 1992. Kleingewässer. In: H. Franz, [Ed.], *Die ökologische Bedeutung des Wassers und sein Schutz*, pp. 89-103, Österr. Akad. Wiss., Wien. – (Second Author: Abt. Allg. Ökol., Inst. Pflanzenphysiol., Univ. Wien, Althanstr. 14, A-1090 Wien).
Contains numerous references to the European odon. communities.

- (10346) [CARRUETTE, P.], 1992. Migrations d'invertébrés au point de vue. *Bull. ann. Parc Marquenterre* 1992: 1 p. [not paged]. – (Domaine du Marquenterre, F-80120 St Quentin/Tourmont).
A note on migrations of *Aeshna cyanea* (20/26-XI-1992) and *Sympetrum sanguineum* (22-VIII, 20/21/26-IX, 22-X-1992) in the Marquenterre Park, France.

- (10347) HECKES, U. & M. FRANZEN, 1992. *Faunistische Untersuchungen in den Ersatzflächen "Eitinger Moos" und "Hirschau" der Autobahndirektion Südbayern (BAB A92 München-Deggendorf, Abschnitt Freising-Eitling). Libellen (Odonata)*. Ökokart (= Ges. ökol. Auftragsf.), München. iv+33 pp., 2 maps excl. – (Publisher: Wasserburger Landstr. 151, D(W)-8000 München-82).

The construction of the superhighway BAB A92 section, Freising-Eitling, S Bavaria, Germany, is to have a negative impact on nature reserve, "Viehlassmos". In a compensation thereof, the superhighway Administration is conserving and managing 2 former swamp areas (surface 53 ha). The objective of the present work was the inquiry into the impact of the management on the local odon. populations, and the presentation of some suggestions for the future management thereof.

1993

- (10348) ADLER, S., 1993. *Libellen Packen im Neustädter Moor – Renzeler Moor und Umgebung*.

Diepholzer Moorniederung (Landkreis Diepholz-Niedersachsen). Auswertung der Libellenkartierung 1992, die im Rahmen des Zivildienstes durchgeführt wurde. Bund-Projekt Diepholzer Moorniederung, Wagenfeld-Ströhen, 222 pp. – (Author: Pfarrgasse 20, D(W)-8856 Harburg-Ebermergen).

This is an exhaustive study of the odon. fauna (38 spp.) of the W part of the Diepholzer Niederung, Lower Saxony, Germany. *Coenagrion mercuriale* is recorded only for the second time from the state. The value of the brief species "monographs" is enhanced by phenology graphs.

- (10349) DIVASIRI, S., 1993. *Taxonomy of Broad-Winged Damselflies (Calopterygoidea) in Khao Yai National Park*. M.Sc. thesis (Agric.), Kasetsart Univ., Bangkok. xiv+108 pp. – (220/1 Trok Watdaowadung, Bangyeekan, Bangplad, Bangkok-10700, Thailand).

9 calopterygid, chlorocyphid and euphaeid spp. & ssp. are known from the Park, situated in the Phanom Dongrak Range, Thailand. These are here described, illustrated and keyed, and some field notes and phenology data are provided. Dr M. Hämäläinen (Helsinki, Finland) helped in the preparation of the work. – The attractive book, containing also col. phot. of set specimens and/or wings (♂, ♀) of all spp., will be a useful identification guide for students of that particular regional fauna. It is well organized and beautifully produced.

- (10350) GROOMBRIDGE, B., [Ed.], 1993. *1994 IUCN Red List of threatened animals*. IUCN, Gland-Cambridge. vi+286 pp. – ISBN 2-8317-0194-5. – (Available from: IUCN Publications Services Unit, 219 c Huntingdon Rd, Cambridge, CB3 0DL, UK; – or IUCN Communications and Corporate Relations Division, 28 rue Mauveme, CH-1196 Gland; – at £ 13.01 net; – prepayment required, Eurocheques unacceptable).

This is a revised and greatly enlarged edn of the work listed in OA 5736, 6598 and 7920. The odon. (138 spp.) are listed on pp. 158-162: 15 spp. are considered "endangered", 17 are "vulnerable", 46 "rare", 50 "indeterminate", and 10 spp. are "insufficiently known". It goes without saying, the status of the taxa concerned is considered from the global point of view, i.e. throughout the sp. range. The status of a sp. within a

particular national territory cannot be subject of the IUCN concern.

- (10351) KLEWEN, R. & P. ROTH, 1993. *Vegetation und Fauna der Bäche um Ronneburg. Bestandserfassung und -bewertung im Rahmen des Umweltkatasters der Wismut. Veröff. Mus. Gera (Naturw.)* 20: 103-124. (With Engl.s.). – (First Author: Im Alten Hof, D-53804 Much). Lists 5 odon. spp., from 14 localities; Ronneburg, Thüringen, Germany.

- (10352) KREIHE, E., 1993. *Massenvorkommen der mediterranen Libellenart Kleines Granatauge (Erythromma viridulum) in Hildesheim. Mitt. ornithol. Ver. Hildesheim* 15: 77-80. – (Theodor-Sturm-Str. 4, D-31135 Hildesheim).

A good population of *E. viridulum* is reported from a large gravel pit nr Hildesheim, Lower Saxony, Germany.

- (10353) MALKMUS, R., 1993. *Drei Libellen-Neunachweise für den Spessart: Onychogomphus forcipatus (L.), Leucorrhinia pectoralis (Charpentier) und Crocothemis erythraea (Brullé) (Ins. Odonata; Bayern). Nachr. naturw. Mus. Aschaffenburg* 101: 35-38. – (Schulstr. 4, D-97859 Wiesenthal).

Records, with lists of the associated spp.; Spessart, Bavaria, Germany.

- (10354) MALKMUS, R., 1993. *Zur Libellenfauna einiger Wildsuhlen und Waldteiche im Zentralspessart (Ins.; Odonata; Bayern; Unterfranken). Nachr. naturw. Mus. Aschaffenburg* 101: 39-47. – (Schulstr. 4, D-97859 Wiesenthal).

23 spp. are reported from 6 localities; distr. Rothenbuch, Bavaria, Germany. Field notes are provided for some spp.

- (10355) SINGH, U.N., 1993. *Studies on food and feeding behaviour of selected aquatic insects in artificial habitat. Comp. Physiol. Ecol.* 18(2): 69-71. – (Aquacult. Res. Lab., P.G. Dept Zool., M.S. Coll., Univ. Bihar, Motihari-845401, Bihar, India).

Apparently the same project as reported in OA 8881. No odon. spp. are stated.

- (10356) WEIDNER, H., 1993. *Johann Franz Christian Heyer, Stadtschreiber von Lüneburg (1777-*

1864) und seine Insektensammlung. *Ent. Mitt. zool. Mus. Hamburg* 11(147): 21-42. (With Engl.s.) – (Uhländstr. 6, D-22087 Hamburg).

A comprehensive biography and appreciation of work of the important, but little known insect collector. T. de Charpentier's 1840 description and figs of *Nehalennia speciosa* are based on Heyer's material, collected "in regione Lunaeburgensi" (Hamburg area, Germany).

1994

- (10357) ADOMSSSENT, M., 1994. Bemerkungen zur Verbreitung und Situation der Libellen im Kreis Herzogtum Lauenburg (Insecta: Odonata). *Faun.-ökol. Mitt., Kiel* 6: 439-468. (With Engl.s.) – (Ökol. & Umweltbildung, FB-3, Univ. Lüneburg, PF, D-21332 Lüneburg).

The odon. fauna of the Herzogtum Lauenburg (Schleswig-Holstein, Germany) has been investigated since 1875 and 57 spp. were evidenced. Since 1978, the status dropped to 45 spp. Even so, the fauna is still considered fairly rich. This is due to the diversity of available habitats, and to the suitable climatic conditions as required by thermophilic taxa.

- (10358) BÖNISCH, R., 1994. Die Sumpf-Heidelibelle (*Sympetrum depressiusculum*) in der Naab-Wondreb-Senke/Nordostbayern. *Acta albert. ratisbon.* 49: 229-242. (With Engl.s.) – (Gummelbergweg 4, D-95652 Kondrau).

Field observations on habitat selection, phenology and behaviour of *S. depressiusculum*. – Cf. also OA 10211.

- (10359) BÖNISCH, R. & J. HOLL, 1994. Zum Vorkommen der Grünen Keiljungfer (*Ophiogomphus cecilia*) in der nördlichen Oberpfalz. *Acta albert. ratisbon.* 49: 221-228. (With Engl.s.) – (Second Author: Egerländerstr. 20, D-92665 Altenstadt). The occurrence of *O. cecilia* in northern Upper Palatinate, Bavaria, Germany, is reviewed and mapped (1986-1991).

- (10360) BRAUCKMANN, C. & L. KOCH, 1994. Spinnentiere und Insekten aus dem Oberkarbon von Hagen-Vorhalle. *Fossilien* 11(1): 45-55. – (First Author: Fuhlrott-Mus., Auer Schulstr. 20, D-42103 Wuppertal/Elberfeld).

A general article on the same subject as presented

in OA 10341.

- (10361) [CARRUETTE, P.], 1994. Inventaire au Parc du Marquenterre. *Entomofaune: odonates. Bull. ann. Parc Marquenterre* 1994: 1 p. [not paged]. – (Domaine du Marquenterre, F-80120 St Quentin/Tourmont).

A checklist of 7 spp.; "Parc Ornithologique du Marquenterre", France.

- (10362) CHAO, H.-f., 1994. A new species of gomphid dragonfly of the genus *Ophiogomphus* Selys from Guangdong, China (Odonata: Gomphi-dae). *Wuyi Sci. J.* 11: 73-75. (With Chin.s.) – (Biol. Control Res. Inst., Fujian Agric. Coll., Fuzhou, Fujian-350002, P.R. China).

O. (Ophiurus) guangdongensis sp.n. is described and illustrated. Holotype ♂: Fengkai Co., Heishiding, 5-VI-1985; deposited at Insect Coll., Zhongshan Univ., Guangzhou, Guangdong prov., China.

- (10363) CHAO, H.-f., 1994. Records of dragonflies collected by Sino-Russian expedition to Yunnan province in 1955-1957 (order Odonata). *Wuyi Sci. J.* 11: 65-72. (Chin., with Engl.s.) – (Biol. Control Res. Inst., Fujian Agric. Coll., Fuzhou, Fujian-350002, P.R. China).

A list of 96 spp., based on 1683 specimens, from ca 30 localities, mostly in the Gangdong prov., China (alt. 80-2100 m). The locality data are in Chinese.

- (10364) COHEZ, D. & F. MARECHAL, 1994. Les odonates au Marquenterre. *Bull. ann. Parc Marquenterre* 1994: 2 pp. [not paged]. – (First Author: 54 rue Jules Ferry, F-62580 Vimy).

A commented checklist of 20 spp.; "Parc Ornithologique du Marquenterre", France.

- (10365) DUNKLE, S.W., 1994. Order Odonata. Dragonflies and damselflies. In: M. Deyrup & R. Franz, [Eds], *Rare and endangered biota of Florida*, Vol. 4: Invertebrates, pp. 265-329. Univ. Press Florida, Gainesville. ISBN 0-8130-1323-2 (paperback; price US \$ 39.95), 8130-1322-4 (hardback; price US \$ 75.-). [Pagination of Vol. 4: xxx+798 pp.] – (Author: Biol. Dept, Spring Creek Campus, Collin Co. Community Coll., 2800 E Spring Creek Pkwy, Plano, TX 75074, USA). There are 156 resident odon. spp. in Florida, 33

(21%) of which are listed in the present work. 7 more spp. are vagrants to Florida. Of the 33 spp. listed, the larvae of 15 (46%) are restricted to the panhandle rivers and streams. – The concise "species monographs" present the following information: taxonomic & Engl. name, the IUCN status, a phot. of the adult, and the following titled sections: "Description", "Range" (with a map showing the Florida range and another one indicating the USA range of each sp.), "Habitat", "Life history and ecology", "Basis for status classification", and "Recommendations". – (For a comprehensive book review of this volume, by J.H. Frank, cf. *Fla Ent.* 78[2]: 380-381; 1995).

- (10366) HENCKEL, A.A. & G. DE VRIES [photos, text anonymous], 1994. *Natuurontwikkeling in het Holtveen-Dwingelderveld*. – [Nature development in the Holtveen-Dwingelderveld]. Staatsbos-beheer, Driebergen. 4 pp. (Dutch). – (Publishers: Afd. Algemene Zaken, Staatsbosbeheer, P.O. Box 1300, NL-3970 BH Driebergen).

A photographic record of *Aeshna juncea*, Holtveen-Dwingelderveld, Drenthe prov., the Netherlands.

- (10367) JIMÉNEZ, C. & M. SPRINGER, 1994. Vertical distribution of benthic macrofauna in a Costa Rican crater lake. *Revta Biol. trop.* 42(1/2): 175-179. (With Span.s.). – (Second Author: Zool. Staatssamml. München, Münchhausenstr. 21, D(W)-8000 München-60).
Samples were taken at a 3-4 m depth, in Cerro Chato, Alajuela (alt. 1140 m). The odon. (*Dasythemis* sp.) were the third most abundant group.

- (10368) KIRK, E.J. & S.A. PERRY, 1994. Macroinvertebrate production estimates in the Kanawha River, West Virginia. *Hydrobiologia* 281(1): 39-48. – (Second Author: WV Coop. Fish & Wildlife Res. Unit, Div. Forestry, West Virginia Univ., Morgantown, WV 26506-6125, USA).
Secondary production estimates were calculated for 13 taxa, incl. *Argia translata*. Annual production and annual biomass of the latter were highest for the gravel basket samplers, while for the remaining taxa they were highest for the multiple samplers.

- (10369) LADET, A., 1994. *Inventaire des odonates du Haut bassin de l'Allier*. Loire Nature, Le Puy en

Velay & Mesure Haut Bassin de l'Allier, Ardèche. vi+39 pp. (Appendix incl.), 1 fold. col. map excl. – (Author: Les Mariolles, F-07110 Chassiers).

This is a monographic treatment of the odon. fauna (47 spp.) of the upper basin of the Allier R. and its tributaries (depts Cantal, Haute-Loire, Lozère, Ardèche), France. It is based on the adult and exuviae evidence, and it is habitat-wise organised. In all, 29 localities were examined and the fauna of each of them is listed. The status of some taxa is briefly discussed, and the value of the work is enhanced by a number of well reproduced habitat and species col. photographs. – The work is very carefully executed. Author's approach and style make it a highly interesting and refreshing reading. – Cf. also OA 8959.

- (10370) MIZUBE NO TOMODACHI [= *Friends at the water's edge*], Nos 1 (Feb. 1, 1994), 2 (Apr. 10, 1994), 3 (Oct. 1, 1994). Published by the Saga Tombo Kenkyu-kai [= Saga Dragonfly Research Association]; edited by Prof. Dr K. Higashi, Dept Biol., Coll. Liberal Arts, Saga Univ., 1 Honjo, Saga, 840, JA. (Jap.).

This is the first odonatological periodical in evidence that is directed exclusively at the primary and middle school pupils. It is edited by one of the leading Japanese professional odonatologists. On the 84 pp. of the first 3 issues, there are over 60 notes and small papers, but an Engl. translation of the titles is at the moment not available.

- (10371) PETERS, G., 1994. Probleme der Diagnostik und phylogenetischen Interpretation tertiärer Insekten am Beispiel von Aeshniden (Odo-nata). *Mitt. dt. Ges. allg. angew. Ent.* 9(1/3): 291-297. (With Engl.s.). – (Inst. Syst. Zool., Mus. Naturk., Humboldt-Univ., Invalidenstr. 43, D-10115 Berlin).

Based on experience gained during the examination of a Lower Messinian odon. wing assemblage, some problems obstructing the identification of caenozoic insect fossils are discussed. The membrane ratios provide an additional species and species-group specific diagnostic feature, enabling the identification of hypothetical ancestral morphotypes, which probably coexisted with the extant mediterranean odon. fauna.

- (10372) POLCYN, D.M., 1994. Thermoregulation during summer activity in Mojave Desert drag-

- onflies (Odonata: Anisoptera). *Funct. Ecol.* 8: 441-449. – (Dept Biol., California St. Univ., San Bernar-dino, CA 92407, USA).
The thermal biology of 7 libellulid and 2 aeshnid spp. was studied. Most spp. were active throughout the day during the hot summer months (shade air temperature 18-45°C). Thoracic temperatures of all spp. studied were maintained more precisely and much higher (mean = 37.5-43.2°C) than, and often exceeded the thermal death point (HT) of, congeners and conspecifics previously studied in cooler habitats. HT was greater (mean = 51.9-53.3°C) in these desert populations than their non-desert counterparts. In contrast to studies in cooler habitats, no differences in thermoregulatory abilities or activity periods were observed between 'fliers' and 'perchers', or between libellulids and aeshnids, in the desert populations.
- (10373) RAMIREZ, A., 1994. Descripción e historia natural de las náyades de odonatos de Costa Rica. 2. Archilestes neblina (Garrison, 1982) (Odonata, Lestidae), con una clave para las especies del género en Costa Rica. *Fol. ent. mex.* 90: 9-16. (With Engl.s.). – (Aptdo Postal 1643-3000, Heredia, Costa Rica).
Ultimate instar larva from the Braulio Carillo National Park is described and illustrated, comprehensive notes on the biology are given, and the larvae of *A. grandis*, *latialatus* and *neblina* are keyed.
- (10374) RAMÍREZ-ULATE, A. & R. NOVELO-GUTIÉRREZ, 1994. Megapodagrionidae (Odonata: Zygoptera) de México y Centroamérica. 1. Las náyades de *Philogenia carrillica*, *P. peacocki* y *P. terraba*. *Acta zool. mex.* (N.S.) 63: 61-73. (With Engl.s.). – (Second Author: Depto Biosist. Insectos, Inst. Ecol., A.C., Apdo Postal 63, MX-91000 Veracruz).
The larvae of the 3 Costa Rican spp. are described, illustrated and keyed, and some field notes are provided.
- (10375) REITER, C., 1994. *Libellenkartierung Landkreis Bad Tölz/Wolfratshausen*, 1994. Bayer. Landesamt Umweltschutz, München. ii+24 pp. – (Publishers: Rosenkavalierpl. 3, D-81925 München; – Author: Pariserstr. 33, D-81667 München). Brief habitat descriptions and habitat-wise species lists; Bavaria, Germany.
- (10376) REN, D., 1994. A new genera [sic!] and species of Liassogomphidae (Insecta, Odonata) from Late Jurassic of Liaoning province, China. *Geoscience* 8(3): 254-258, pl. 1 excl. (Chin., with exhaustive Engl.s.). – (Geol. Mus. China, Xisi, Beijing-100034, P.R. China).
Chrysogomphus beipiaoensis gen.n., sp.n. is described and illustrated from the Late Jurassic of Beipiao city, Liaoning prov., China. It is compared with the 5 previously known liassogomphid genera and with *Protolindenia*.
- (10377) REN, D., 1994. Discovery of fossil bittacids in China. *Acta geol. sin.* 7(2): 219-224, pl. 1 excl. – (Geol. Mus. China, Xisi, Beijing-100034, P.R. China).
In the editorial postscript, a brief biography and portrait of this odon. palaeontologist are appended. Born 1963, M.Sc. (1989) from the Chin. Acad. Geol. Sci.
- (10378) RUTHERFORD, J.E. & R.J. MELLOW, 1994. The effects of an abandoned roast yard on the fish and macroinvertebrate communities of surrounding beaver ponds. *Hydrobiologia* 294(3): 219-228. – (Dept Biol., Wilfried Laurier Univ., Waterloo, ON, N2L 3C1, CA).
Recently formed beaver-ponds, surrounding an abandoned copper-nickel ore roast yard nr Sudbury, Ontario, Canada, were influenced by highly acidic and heavy-metal contaminated affluent. 8 odon. gen. (but no spp.) are listed. The acid tolerant taxa, incl. *Enallagma* and *Ischnura* were found in the downstream ponds. It is concluded that long-abandoned mining and refining sites can continue to have a marked effect on aquatic communities.
- (10379) SEIDENBUSCH, R., 1994. Aberration der Flügelzeichnung bei *Calopteryx virgo virgo* L. *Acta albert. ratisbon.* 49: 207-208. (With Engl.s.). – (Klenzestr. 5, D-92237 Sulzbach-Rosenberg).
C. v. virgo ab. *bicolor* is described and illustrated (Vils R. nr Kötzersricht/Oberpfalz, Germany; 1-VII-1990; not under the Code). The form is peculiar by the transparent areas in fw and hw.
- (10380) SEIDENBUSCH, R., 1994. Anmerkungen zur Variabilität des dunklen Flügelfleckes bei *Calopteryx splendens splendens* Harris. *Acta albert. ratisbon.* 49: 209-212. (With Engl.s.). – (Klenze-

- str. 5, D-92237 Sulzbach-Rosenberg).
Wing coloration patterns in *C. s. splendens* are compared in ♂ from 11 localities in Austria, Croatia, Germany, Ireland and Italy. The variability includes almost transparent wings and those that are broadly marked.
- (10381) SEIDENBUSCH, R., 1994. Fließgewässerstrukturen als Attraktivitätsauslöser für Gomphiden (Odonata, Anisoptera). *Acta albert. ratisbon.* 49: 217-219. (With Engl.s.). – (Klenzestr. 5, D-92237 Sulzbach-Rosenberg).
Some of the lotic habitat structures that appear particularly attractive to *Gomphus vulgatissimus*, *Ophiogomphus cecilia* and *Onychogomphus forcipatus* are described and briefly discussed.
- (10382) SEIDENBUSCH, R., 1994. Flügelabnormalität bei *Erythromma najas* Hansemann. *Acta albert. ratisbon.* 49: 215-216. (With Engl.s.). – (Klenzestr. 5, D-92237 Sulzbach-Rosenberg).
The "abnormal" venation in the right fw of a ♀ from Holnstein/Oberpfalz, Germany, is described and illustrated.
- (10383) SEIDENBUSCH, R., 1994. Variabilität der Pseudopterostigmata-Ausprägung bei *Calopteryx splendens* Harris. *Acta albert. ratisbon.* 49: 213-214. (With Engl.s.). – (Klenzestr. 5, D-92237 Sulzbach-Rosenberg).
The ♀ pseudopterostigma variability was studied in a *C. s. splendens* population from the Vils R., Oberpfalz, Germany. There is a trend towards a reduction in the hyalin-winged individuals.
- (10384) SEITZ, C. & H. BEHRENDT, 1994. *Tierökologische Untersuchung auf Ausgleichsflächen für den Flughafen München II und auf landwirtschaftstypischen naturnahen Restbiotopen im nordöstlichen Erdinger Moos*. DiplArb. Fachhochsch. Weihenstephan (FB Landespf.). [Available pp. 1-66 only]. – (Author's addresses unknown).
The study area is situated in the distr. of Erding (between Freising & Eitting), Bavaria, Germany. 14 aquatic and 12 terrestrial localities were studied. The status of 23 odon. spp. is assessed.
- (10385) SILSBY, J., 1994. Dragonflies on Luzon & Palawan. *Fil-Kulisan* 2(2): 23-24, col. phot. on cover pp. 1 & 4. – (1 Haydn Ave., Purley, Surrey, CR8 4AG, UK).
Brief field notes on some common and a few endemic spp., with a note on the rapid disappearance of the Philippine odon. habitats, caused by the large-scale destruction of local rain-forests. – (This new, beautifully reproduced and richly col. illustrated journal, containing many descriptions of new taxa, etc., can be ordered from the Insect Society of the Philippines, M6 Prince Tower Bldg, Tordesillas St., Salcedo Village, Makati, Metro Manila, the Philippines. The manuscripts are to be sent to the Editors, at: 94 Aguirre Ave., BF Homes, Pañaque, Metro Manila, the Philippines).
- (10386) SRIVASTAVA, V.K., [Ed.], 1994. *Advances in oriental odonatology*. [Proceedings of 4th South Asian Symposium of Odonatology, Allahabad, India, 10-12 October 1992]. Cherry Publications, Allahabad, vi+118 pp. – Price: Rs 300.- (India), US \$ 45.- (overseas). – (Orders to: Dr V.K. Srivastava, Dept Zool., C.M.P. Coll., 318 Alopī Bagh, Allahabad-211006, India).
A very attractive and nicely reproduced book (soft cover, 14.0 × 21.5 cm). – C o n t e n t s: Chowdhury, S.H. & M. Jashimuddin: Morphometric studies on the larvae of *Acisoma panorpoides* panorpoides (Rambur) (pp. 1-7); – Biswas, V., A. Begum, M.A. Bishar & B.R. Biswas: Some co-existing dragonfly (Odonata: Anisoptera) larvae of Ramna Lake, Dhaka, Bangladesh (pp. 9-12); – Srivastava, V.K. & B. Suri Babu: Identifying description of the final instar larva of *Enallagma parvum* Selys (Zygoptera: Coenagriidae) from Sagar (M.P.) (pp. 13-17); – Rose, S. & M. Thomas: Feeding behaviour of *Anax guttatus* (Burmeister) (Odonata: Anisoptera) (pp. 19-22); – Biswas, V., A. Begum, M.A. Bashir & S.A. Begum: Emergence pattern of some dragonfly (Odonata: Anisoptera) larvae under the laboratory condition (pp. 23-30); – Tembhare, D.B. & R.J. Andrew: Activity of the cephalic neuroendocrine system during development of the last instar larva of *Tramea virginia* (Rambur) (Anisoptera: Libellulidae) (pp. 31-40); – Srivastava, J.P. & N. Agrawal: Prevalence and abundance of anisopteran odonates during kharif (rainy) season in Kanpur, India (pp. 41-46); – Chowdhury, S.H. & M. Mohiuddin: Dragonfly phenology – a mechanism for optimal habitat utilisation (pp. 47-54); – Andrew, R.J. & D.B. Tembhare: Development of the male secondary copulatory apparatus

in the dragonfly *Tramea virginia* (Rambur) (Anisoptera: Libellulidae) (pp. 55-61); – *Sangal, S.K., P. Bhandari & A. Saxena*: Reproductive behaviour in *Orthetrum sabina sabina* (Drury) and *neurothemis intermedia intermedia* (Rambur) (Anisoptera: Libellulidae) (pp. 63-68); – *Chowdhury, S.H. & N. Karim*: Observations on the reproductive behaviour of *Copera annulata* (Selys) (pp. 69-76); – *Srivastava, V.K., B.K. Srivastava & B. Suri Babu*: The behaviour of reproduction and oviposition in *Pseudagrion decorum* (Rambur) (Zygoptera: Pseudagrioninae) in central India (pp. 77-84); – *Mittal, O.P.*: Chromosome organization in two species of damselflies (Odonata: Zygoptera: Coenagriidae) (pp. 85-91); – *Sandhu, R., G. Walia & S. Gulati*: Chromosomal studies of three abundantly occurring damselflies from Himachal Pradesh (India) (pp. 93-100); – *Sandhu, R. & G. Walia*: Karyological studies of four species of damselflies (Odonata: Zygoptera) (pp. 101-109); – *Sandhu, R. & I. Malhotra*: Karyological studies of four aeshnid dragonflies from states of Jammu & Kashmir, and Himachal Pradesh (India) (pp. 111-115). – (For Abstracts of Papers cf. OA 8800; for Proceedings of the first 3 Indian/South Asian Symp. Odonatol. cf. OA 5057, 7127, 7647, resp.).

Deals mostly with birds and other vertebrates. *Anax imperator* and *Orthetrum cancellatum* are mentioned as common in gravel pits in Slovenia.

- (10387) USSEGLIO-POLATERA, P., 1994. Theoretical habitat templates, species traits, and species richness: aquatic insects in the Upper Rhône River and its floodplain. *Freshw. Biol.* 31: 417-437. – (Cent. Rech. Ecol., Univ. Metz, B.P. 4116, F-57040 Metz).

For Plec., Ephem., Odon., Trich. and Col. in 2 sites of the Upper Rhône R., France, the following are examined: (1) relationships among 19 species traits, (2) habitat utilization of spp., (3) the relationship between species traits and habitat utilization, and (4) trends of species traits and species richness in a template of spatial-temporal variability. 14 odon. spp. (6 fam.) are considered (the Rhône R. and its alluvial floodplain habitats at Brégner-Cordon and Jons).

- (10388) VOGRIN, M., 1994. *Gramoznice, narava in mi. Problematika divjih odlagališč v gramoznicah in njihova vloga v naravi*. – *Gravel pits, nature and we*. Vogrin, Maribor, 26 pp. – Price: SIT 600.- net. (Slovene, with Engl.s.). – (Author's/Publisher's address not stated).

- (10389) WELLBORN, G.A., 1994. Size-biased predation and prey life histories: a comparative study of freshwater amphipod populations. *Ecology* 75(7): 2104-2117. – (Dept Biol., Yale Univ., New Haven, CT 06520, USA).

The *Hyaella azteca* populations were studied. Larval odon., the principal predators in the marsh habitat, select the prey in accordance with the predator's size: the small larvae preferring juvenile *Hyaella*, and the largest larvae preferring adults. Laboratory data are presented for 7 odon. spp. and the relationships are discussed in detail.

- (10390) WIPFLI, M.S. & R.W. MERRITT, 1994. Disturbance to a stream food web by a bacterial larvicide specific to black flies: feeding responses of predatory macroinvertebrates. *Freshw. Biol.* 32: 91-103. – (First Author: Forestry Sci. Lab., Pacific NW Res. Stn, U.S. Forest Serv., 2770 Sherwood Ln, Suite 2A, Juneau, AK 99801, USA). A field study was conducted to assess feeding habitat changes of 2 Plec. spp. following the loss of larval simuliid prey from 2 streams, and to determine the relative importance of black fly larvae as prey for these and other selected predatory benthic macroinvertebrates. The odon. are hardly considered, but *Boyeria vinosa* ingested significantly more *Baetis flavistrigata* (Ephem.) than *Simulium vittatum* (Dipt.) prey.

1995

- (10391) [ABSTRACTS OF PAPERS read at the 13th International Symposium of Odonatology, Essen, Germany], 1995. Edited by E.G. Schmidt. Issued by the State University of Essen. ii+90 pp. – Note: No copies were produced for general distribution. Cf. also OA 10419 and 10460. Provisional programme (pp. 2-5); – Abstracts of papers: Schmidt, E.: Introduction (p. 7); – Introduction to the Symposium (p. 8); – A historical review on odonatological activities in Northrhine-Westphalia (NRW) (pp. 9-10); – Abbott, J.C. & K.W. Stewart: Current status of the Odonata of South-Central Nearctic & adjacent neotropical biotic provinces (p. 11); – Andrew, J.R.: Functional morphology of the components

- associated with intra-male sperm translocation in Anisoptera (p. 12); – *Andrew, R.J. & D.B. Tembhare*: The post-ovarian genital complex in *Anax guttatus* (Burmeister) (Anisoptera: Aeshnidae) (p. 13); – *Bernard, R.*: Coexistence of *Cercion lindenii* (Selys, 1840) (Zygoptera: Coenagrionidae) with some species of Coenagrionidae and Platycnemididae on lakes in the Wielkopolska region, north-western Poland (p. 14); – *Buchwald, R.*: Structure and floristic composition of vegetation: what is their significance for the occurrence of dragonfly species? (p. 15); – *Carchini, G., A.G. Solimini & G.A. Tarallo*: Damselfly fauna of a lowland polluted river with special emphasis on larval growth variation of two Coenagrionidae species (p. 16); – *C. Salmah, M.R. Hassan, S.T.S. Hassan, A. Abu & A.B. Ali*: Larval population of *Neurothemis tillia* (Drury) (Odonata: Libellulidae) in the rice field in Malaysia (p. 17); – *Chowdhury, S.H. & R. Akhter*: Comparative studies on the larval stages of two congeneric species of libellulid dragonflies (p. 18); – *Cordero, A., S. Santolamazza carbone & C. Utzeri*: Female colour polymorphism in ischnuran damselflies: a neutral character to selection? (p. 19); – *Etyang, P.E. & P.L. Miller*: Dragonflies of the Sango Bay of Lake Victoria (p. 20); – *Gassmann, D. & J. van Tol*: Cladistic biogeography of the Calicnemidinae (Odonata, Zygoptera, Platycnemididae) of the Indo-Pacific region (p. 21); – *Haldar, D.P.*: Studies in the protozoan parasites in odonates of India (p. 22); – *Hatto, Y.*: Several Japanese methods of catching dragonflies, especially the mating or copulating method (p. 23); – *Hilfert, D.*: Who is the first: the begin of flight activity of odonates (p. 24); – *Inden-Lohmar, C.*: Population structure and reproductive behaviour of *Aeshna cyanea* Müller (Aeshnidae) (p. 25); – *Johansson, F.*: Do habitat complexity and predators influence damselfly larval functional response? (p. 26); – *Jödicke, R.*: Diel periodicity of flight activity in *Anax imperator* Leach (p. 27); – *Klingenberg, K.*: Comparative field and molecular genetic relationship analyses between *Orthetrum coerulescens* (Fabricius) and *O. anceps* (Schneider) (Anisoptera: Libellulidae) (p. 28); – *Do Lago Carvalho, A.*: Cladistic analysis of the genus *Coryphaeschna* Williamson, 1903 sensu Calvert, 1956 (Anisoptera, Aeshnidae) (p. 29); – *Dragonflies in origami* (p. 30); – *Lehmann, G.*: Seasonal decline in body dimensions in a population of *Platycnemis pennipes* (Zygoptera: Platycnemididae) (p. 31); – *Lindeboom, M.*: Copulation behaviour of *Calopteryx splendens* (p. 32); – *Marinov, M.G.*: Dragonflies (Odonata) from the Sultan Marshes Reserve and some other rivers in Turkey (pp. 33-34); – *De Marmels, J.*: A five year survey of an odonate community inhabiting a North Venezuelan mountain stream (p. 35); – *May, M.L.*: A preliminary phylogenetic analysis of the "Corduliidae" (p. 36); – *Muzon, J.*: Odonata from Patagonia: species richness and distributional patterns (p. 37); – *Natarajan, A.V.*: Role of wing pads in respiration in the larvae of the dragonfly *Anax immaculifrons* (Rambur) (Anisoptera: Aeshnidae) (p. 38); – *Norma-Rashid, Y.*: Behaviour of *Tyriobapta torrida* Kirby at the reproductive and roosting sites (p. 39); – *Novelo-Gutiérrez, R.*: Larvae of some Mexican species of the New World genus *erpetogomphus* (p. 40); – *Orr, A.G.*: Courtship and mating frequency in Bornean *Libellago* (Zygoptera: Chlorocyphidae) (p. 41); – *Ott, J.*: *Crocthemis erythraea* – an indicator for climatic change? (p. 42); – *Pujol-Luz, J.R.*: Phylogenetic relationships among the neotropical species of *Palpopleurini* sensu Montgomery, 1940 (Anisoptera: Libellulidae) (p. 43); – *Raab, R., A. Chovanec & K. Wiener*: Aspects of habitat selection of adult dragonflies at the "Tritonwasser" in Vienna (p. 44); – *Rith-Najarian, J.C.*: Ecology and biogeography of odonates in a northern Minnesota mosaic forest landscape (p. 45); – *Rüppell, G. & D. Hilfert*: Studies on *Calopteryx haemorrhoidalis* & other dragonflies (p. 46); – *Sandhu, R. & G.K. Walia*: A report on the karyotypes of damselflies of North and North-East India (p. 47); – *Siegert, B.*: Foraging of larvae of *Enallagma cyathigerum* (Charpentier) and *Platycnemis pennipes* (Pallas) (p. 48); – *Steiner, C.*: The influence of predators on *Enallagma cyathigerum* and *Platycnemis pennipes* larvae (Odonata: Zygoptera) (p. 49); – *Stoks, R., M. Santens, S. de Vocht & L. de Bruyn*: Microhabitat choice in *Enallagma cyathigerum*: a possible explanation (p. 50); – *Suhling, F.*: Life history of *Onychogomphus uncutus*. 2. Effects of food availability and larval density (p. 51); – *Taguchi, M.*: Reproductive behaviour and female choice in *Calopteryx atrata* (p. 52); – *Tembhare, D.B. & S.M. Wazalwar*: Mouthpart sensilla in the dragonfly *Brachythemis contaminata* (Fabr.) (p. 53); – *Thomas, M., M. Gladstone & M. Daniel*: Morphological variation of the rectal gill chamber of

- Ictinogomphus rapax* (Rambur) and *Anax guttatus* (Burmeister) (p. 54); – *Utzeri, C., L. Dell'Anna, G. Carchini, M. Cobolli & E. de Matthaeis*: Phenology, activity times and body size of two syntopic populations of *Chalcolestes parvidens* (Artobolevski, 1929) and *C. viridis* (Vander Linden, 1825) in central Italy (Lestidae) (p. 55); – *Weiher, B. & H. Komnick*: Digestion and utilization of triacylglycerols and phosphatidylcholines by *Aeshna cyanea* larvae (p. 56); – *Wendler, A.*: Factors influencing the egg-development in *Platynemis pennipes* (Zygoptera: Platynemididae) (p. 57); – *Zessin, W.*: Secondary copulation in Odonata, a phylogenetic approach (p. 58); – Hagen-Vorhalle (Namurian, Upper Carboniferous; FR Germany), the oldest Odonata-bearing of the world (p. 59); – Video presentations: *Hartung, M.*: Egg laying and development of some European Odonata (p. 60); – *Sandhall, A.*: Dragonfly life (p. 60); – Informal presentations: *Dumont, H.*: Freeland hybridization between *Calopteryx orientalis* & *C. intermedia* in Iran (p. 61); – *Cordero, A.*: A new record of *Macromia splendens* (p. 61); – Field trips: *Schmidt, E.G.*: Key for determination of dragonflies by sight and by photo-documents (pp. 63-72); – *Zessin, W.*: Midsymposium tour on fossils (p. 73); – *Rudolph, R. & E. Schmidt*: Field trip to dragonfly habitats in West-Muensterland (pp. 74-75); – Programme of Postsymposium tour (pp. 77-78). – Also included are the agendas of the 9th Meeting of the IUCN/SSC Odonata Specialist Group (N. Moore, p. 79) and of the SIO Plenary Business Meeting (M.L. May, p. 80), the List of participants (pp. 81-88), and the Announcement of the 20th Int. Congr. Ent. (G. Carchini, pp. 89-90).
- (10392) *ADOMSENT, M.*, 1995. Bemerkenswerte Funde mediterraner Libellen in unserem Faunengebiet während des heissen Sommers 1994. *Bombus* 3(13/16): 51-52. – (Drosselweg 3, D-21403 Wendisch-Evern).
From Lower Saxony and Schleswig-Holstein (Germany), the 1994 records are listed of 10 "mediterranean" spp.
- (10393) *ANDERSON, T.M. & N.H. ANDERSON*, 1995. The insect fauna of spring habitats in semi-arid rangelands in central Oregon. *J. Kans. ent. Soc.* 67(2/Suppl.): 65-76. – (Dept Ent., Oregon St. Univ., Corvallis, OR 97331, USA).
Includes a checklist of 15 (mostly common) odon. spp. from spring habitats and the Bridge Creek, Wheeler Co., Oregon, USA.
- (10394) *ANDO, H., Y. WATANABE*, 1995. Embryonic development of *Epiophlebia superstes*, 1 & 2. *Insectarium, Tokyo* 32(4): 92-98, (5): 134-141. (Jap., with Engl. title & fig. captions). – (First Author: Sugadaira Montana Res. Cent., Univ. Tsukuba, Sanada, Nagano, 386-22, JA).
[Abstract not available].
- (10395) *ANDREW, R.J. & D.B. TEMBHARE*, 1995. Ultrastructural post-oviposition changes in the egg chorion of the dragon-fly *Zygomma petiolatum* Rambur (Odonata: Libellulidae). *Int. J. Insect Morphol. Embryol.* 24(2): 235-238. – (Second Author: Dept Zool., Nagpur Univ. Campus, Amravati Rd, Nagpur-440010, India).
It is emphasised, the species-specific modifications, which occur in the endo- and exochorion during oviposition, are associated with the epiphytic oviposition mode, and are of taxonomic importance.
- (10396) *AOKI, T.*, 1995. Description of the larval stage of *Zygomma obtusum* Albarda from Minamidaito Island, Japan, and comparison between larvae of *Z. obtusum* and *Z. petiolatum*. *Gekkan-Mushi* 291: 25-27. (Jap., with Engl. fig. captions & very detailed s.). – (Fujimigaoka 2-19-13, Nishi-ku, Kôbe-shi, Hyogo, 651-22, JA).
The description and figs of ultimate instar, reared from eggs (Okinawa pref., Japan).
- (10397) *ARAI, Y.*, 1995. Significance of putting up the Dragonfly Park. *Nature & Insects* 30(8): 2-3. (Jap., with Engl. title). – (1233-2 Sueno, Yorii-machi, Oosato-gun, Saitama, 369-12, JA).
[Abstract not available].
- (10398) *ARGIA*. *The news journal of the Dragonfly Society of the Americas*, Vol. 7, No. 2 (July 7, 1995). – (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).
Signed articles: *Daigle, J.*: New Mexico: DS Annual Meeting and Arizona side trip (pp. 2-3); – *Orr, R./Bruennelle, P.-M./Roble, S./Nikula, B./Donnelly, A. & N. Donnelly/Blanchard, S.*: New and noteworthy records (pp. 3-4); – *Donnelly, N.*: *Ophiogomphus anomalus* in the news (p. 4); –

- Paulson, D.*: First record of *Basiaeschna janata* from Manitoba (p. 4); – *Roble, S.M.*: First record of *Miathyria marcella* in Virginia (pp. 4-5); – News from Virginia (pp. 5-6); – Confirmation of the Nantucket record of *Tramea abdominalis* (pp. 6-8); – *Sones, J.*: Dragonfly flights on Cape Cod, Massachusetts (pp. 8-10); – *Barber, B.*: Welcome sweet springtime (pp. 10-11); – *Donnelly, N.*: Quebec trip: a few collectors find many dragonflies (pp. 11-12); – How did those huge Paleozoic dragonflies breath? (pp. 12-13); – *Michalski, J.*: You're not alone: the Barlow-Michalski North Carolina expedition of May 1995 (pp. 13-15); – *Orr, R.L.*: Do dragonfly larvae sunbathe? (p. 15); – *Donnelly, N.*: The Beatty-Donnelly Southwestern Expedition, 1954 (pp. 15-19); – *Daigle, J.*: 1995 DSA financial report (p. 20).
- (10399) AUPič, N. & V. TOMC, 1995. Kačji pastirji. – [Dragonflies]. In: Raziskovalni tabor Zalog 95, Novo mesto, 21.-30. junij 1995, pp. 21-26, Klub za nadarjene učence, Novo mesto. (Slovene). – (c/o Dipl.-Biol. M. Kotarac, Antoličičeva 1, SI-62204 Miklavž-na-Dravskem-polju). During a youth field research workshop at Zalog, Lower Carniola, Slovenia (June 21-30, 1995), 32 odon. spp. were evidenced from 21 localities (alt. 145-330 m). This is a preliminary checklist, without comments. – (The book, 68 pp., can be ordered from "Zavod za varstvo naravne in kulturne dediščine", Skalickega 1, SI-68000 Novo mesto).
- (10400) BAJD, B., 1995. *Pojdimo k mlaki*. – [Let us go to the pond]. Pedagoška obzorja, Novo mesto 76 pp. – ISBN 86-81379-16-X. (Slovene). The book is directed at young readers: dragonflies are dealt with on pp. 34-35, 73-74.
- (10401) BEDJANIČ, M., 1995. Poročilo odonološke skupine. – [Report of the Odonata team]. In: M. Bedjanič, [Ed.], Tabor študentov biologije: Raka 92, Smast 93, Črneče 94, pp. 67-72, ZOTKS – Gibanje znanost mladini, Ljubljana. (Slovene). – (Fram 117/a, SI-62313 Fram). 33 odon. spp., evidenced July-Aug. 1994 at 41 localities in Carinthia, Slovenia, are listed along with the locality data.
- (10402) BELLE, J., 1995. On the female sex of some elusive South-American Gomphidae with the descriptions of three new genera and four new species (Odonata). *Zool. Meded.* 69(2): 19-36. – (Onder de Beumkes 35, NL-6883 HC V-lp). *Anomalophlebia nitida* gen.n., sp.n. (holotype ♀; Venezuela, Bolivar, Los Pijiguasos), *Praeviogomphus proprius* gen.n., sp.n. (holotype ♀; Brazil, Rio de Janeiro, Itatiaya), *Brasiliogomphus uniseries* gen.n., sp.n. (holotype ♀; Brazil, São Paulo, Lins) and *Idiogomphoides emmeli* sp.n. (holotype ♀; Brazil, Rondônia, Rio Pardo) are described and illustrated. A syntype ♀ *Agriogomphus sylvicola* Sel. is designated as lectotype. The ♀♀ of *Diaphebia nexans* Calv. Gomphoides perdita (Först.) are described for the first time.
- (10403) BERNARD, R., 1995. Fascynujący świat ważek. – The fascinating world of dragonflies. *Salamandra Biul.* 1(2): 8-9, 6 col. figs on cover pp. 1 & 4. – The journal appears in 2 editions: the original Polish edn is illustrated, the Engl. edn contains solely the unabridged translations; the said paper appears on pp. 5-6. – (Dept Gen. Zool., Mickiewicz Univ., Ul. Fredry 10, PO-61-710 Poznan). General, with references to the Polish fauna (72 spp.).
- (10404) BHATTACHARIA, D.K., 1995. Insects associated with the aquatic macrophytes in the fresh water wetlands of West Bengal. *Abstr. Pap. natn. Symp. Perspective in Biodiversity, Calcutta*, p. 34. – (Dept Zool., Kalyani Univ., Kalyani, W. Bengal, India). 6 odon. spp. were found in association with aquatic macrophytes, but their names are not stated.
- (10405) BROCK, V., E. KIEL & W. PIPER, 1995. *Gewässerfauna des norddeutschen Tieflandes. Bestimmungsschlüssel für aquatische Makroinvertebraten*. Blackwell Wissenschafts-Verlag, Berlin-Wien [etc.]. x+225 pp. – ISBN 3-8263-3044-7. – (Publishers: Kurfürstendamm 57, D-10707 Berlin; – Feldgasse 13, A-1238 Wien). A simple identification field guide for the freshwater macroinvertebrate fauna of the North-german Lowlands (mostly to the higher taxa only). The odon. larvae are dealt with by W. Piper (pp. 63-65, 161-165).
- (10406) BUCHWALD, R., [1994] 1995. Vegetazione e odonotofauna negli ambienti acquatici del-

l'Italia centrale. *Braun-Blanquetia* 11: 1-72, 5 fold. tabs excl. (With Germ. & Fr.s's). – (Inst. Biol. II/Geobot., Univ. Freiburg, Schänzlestr. 1, D-79104 Freiburg/Br.).

The odon. communities of 69 wetland localities in the prov. of Marche, Umbria, Lazio, Abruzzo and Molise (central Italy) are described and discussed with particular reference to the respective plant associations. – This is certainly one of the key studies re the odon. assemblage dependance on the composition and structure of the vegetation.

- (10407) CIEMINSKI, K.L. & L.D. FLAKE, 1995.

Invertebrate fauna of wastewater ponds in south-eastern Idaho. *Gt Basin Nat.* 55(2): 105-116. – (Second Author: Dept Wildlife & Fish Serv., Sth Dakota St. Univ., Box 2140B, Brookings, SD 57007, USA).

Water column invertebrates were sampled monthly (June 1990-July 1991) in 15 sewage, industrial and radioactive wastewater ponds. The odon. were hardly represented. This is probably due to the circumstance, that most of these are commonly associated with vascular hydrophytes, while emergent vegetation is lacking in most ponds.

- (10408) CONTACTBLAD NEDERLANDSE LIBELLENONDERZOEKERS – [BULLETIN OF THE NETHERLANDS DRAGONFLY WORKERS], No. 24 (July 1995). (Dutch). – (G. Abbingh, Muddegoorn 78, NL-9403 NK Assen).

The issue contains a brief report on the 25th Anniversary Meeting of the Dutch Dragonfly Society (p. 2, W.-J. Hoeffnagel), and summaries or full papers of the presentations presented at that Meeting, by B. Kiauta (p. 3), M. Verdonk (p. 3), H. Esselink, M. Geertsma & J. Kuper (pp. 4-5), G. De Knijf & A. Anselin (pp. 6-10), W. de Flieger (pp. 11-12), R. Ketelaar (p. 13); – N. Dingemanse (p. 13), G. Kurstjens (pp. 14-16), W.-J. Hoeffnagel (p. 17), M. Wasscher (pp. 18-19), and G.-J. van Pelt (pp. 19-23). – The announcements of 2 field trips and the indoor evening gatherings conclude this highly interesting issue (p. 24).

- (10409) CORDERO, A., 1995. Correlates of male mating success in two natural populations of the damselfly *Ischnura graellsii* (Odonata: Coenagrionidae). *Ecol. Ent.* 20(3): 213-222. – (Area Ecol., Univ. Vigo, Avda Buenos Aires s/n, ES-

-36002 Pontevedra, Galicia).

The 2 populations (at Lourizán and O Rosal, NW Spain) were studied by means of mark-release-recapture techniques. Recaptured ♂♂ were a random sample of the original marked population with regard to date of marking. At O Rosal a greater proportion of young ♂♂ than old ♂♂ disappeared after marking; at Lourizán recaptured ♂♂ were larger than unrecaptured ones. – The number of matings observed in both populations showed great daily variation. Most of the variation is accounted for by climatic variables. Most ♂♂ (56-65%) and many ♀♀ (41-45%) were never observed to mate. – ♂ lifetime mating success (LMS) was highly correlated with lifespan in both populations. At O Rosal, it was also positively correlated with body length, and mated ♂♂ were larger than those unmated. This surprising result for a non-territorial sp. was due to the positive correlation between data of marking and size. There was a positive correlation between body size and mobility for ♂♂ at O Rosal, but mobility was not correlated with ♂ LMS. – As predicted by sexual selection theory, the standardized variance in ♂ LMS was greater than in ♀ LMS. Variation in mature lifespan explained 16% of variance in ♂ LMS at Lourizán and 28% at O Rosal.

- (10410) DE MARMELS, J., 1995. La larva de *Euthore fastigiata meridana* Selys, 1879 (Odonata: Polythoridae). *Resum. 14 Congr. Venez. Ent., Barquisimeto*, p. 45 [abstract only]. (Span.). – (Inst. Zool. Agric., Fac. Agron., Univ. Central Venezuela, Aptdo 4579, Maracay 2101-A, Venezuela). The larva was (orally) described. No larval structural features are known to enable a clear generic separation of *Chalcopteryx*, *Chalcothore*, *Cora* and *Euthore*, though the few described spp. can be identified by their specific features.

- (10411) DE VOS, A., 1995. Libellen fotografie. – Photography of Odonata. *Stridula* 19(1): 19-22. (Dutch, with Engl. title). – (Author's address not stated).

General, directed at amateur dragonfly fans, relating some Author's personal experience with the photography of several spp.

- (10412) DIEDERICH, A., D. NEUMANN & J. BORCHERDING, 1995. Flora und Fauna in Gräben einer niederrheinischen Auenlandschaft.

- Auswirkungen von Grabenräumungen. *Natur Landschaft* 70(6): 263-268. (With Engl.s.). – (Zool. Inst., Univ. Köln, Weyertal 119, D-50923 Köln).
- 5 samples from drainage ditches in the floodplain of the Lower Rhine were investigated with respect to physico-chemical parameters, morphology of lakes and rivers, the occurrence of macrozoobenthos spp., etc. The results are discussed with regard to the possible effects of ferric hydroxide precipitates in the ground water and under the aspect of mechanical ditch management. Only a brief reference is made to the odon.
- (10413) *DIGEST OF JAPANESE ODONATOLOGICAL SHORT COMMUNICATIONS*, No. 2 (Aug. 1995). Published by N. Ishizawa (1644-15, Yamaguchi, Tokorozawa, Saitama, 359, JA). [Title modified from that in OA 10155]. – *Muraki, A.*: Records of *Sympetrum parvulum* (Bartenef) from unusual habitats in Shiga and Gifu prefectures, central Honshu (p. 1); – *Arai, Y.*: *Sympetrum frequens* emerged in midsummer (p. 1); – *Yokoyama, T.*: *Oligoaeschna pryleri* (Martin) was captured at Sapporo after an interval of 30 years (pp. 1-2); – *Kano, K., H. Kita, Y. Hirose & S. Ito*: Questions on the larvae of *Somatochlora alpestris* (p. 2); – *Kano, K. & H. Kita*: Unsuccessful abnormal coupling in *Calopteryx atrata* (Selys) (p. 2); – *Matsuki, K., M. Sugimura & K. Nagamine*: Descriptions of the larva of *Chlorogomphus brunneus keramensis* Asahina, 1972 (Cordulegastridae, Odonata) (pp. 2-3); – *Miyakawa, K.*: Odonata appeared at a newly made pond in the Sayama Hills, 1994 (p. 4); – The insect for the month: *Indolestes peregrinus* (p. 4).
- (10414) *The DRAGON-FLIER. Newsletter of the Ohio Dragonfly Survey*, Columbus, Vol. 5, No. 4 (Sept. 1995). – (c/o B. Glotzhober, Ohio Hist. Soc., 1982 Velma Ave, Columbus, OH 43211-2497, USA).
- All notes by the Ed.: More malaise trap reports (p. 1); – Photography versus collection (p. 1); – Bats and dragonflies? (p. 1); – New publication on Odonata (p. 2); – Ohio Annual Meeting report (p. 2); – DSA Annual Meeting report (pp. 2-3); – Endangered insects and research: Ohio at the fore front? (p. 3); – English names for Odonata (pp. 3-4; cf. OA 10457).
- (10415) EDELAAR, P., 1995. Warme zomer brengt Zadellibel naar Nederland. – [Warm summer brings *Hemianax ephippiger* to the Netherlands]. *NRC Handelsblad* (Wetenschap & Onderwijs) 25(259): 3; issue of Aug. 3. (Dutch). – (Author's address not stated).
1 ♂, 1 ♀, Budel-Dorpplein, Noord Brabant prov., 15-VII-1995.
- (10416) ENDERSBY, I.D., 1995. A new suburban record for dragonfly *Cordulephya pygmaea* (Odonata: Corduliidae). *Victorian Ent.* 25(3): 52-54. – (56 Looker Rd, Montmorency, Vic. 3094, AU).
2 ♂ were recorded at Montmorency, Vic., Australia, Feb. 21 and March 4, 1995, resp. The circumstantial evidence of the previous records is briefly reviewed, and the 8 specimens in the Mus. of Victoria are listed. There are at least 2 previous records from the Melbourne suburban area.
- (10417) EVRARD, M. & J.-C. MICHA, 1995. Relation entre la diversité du substrat et la diversité faunistique dans un bief de la rivière Meuse. *Annls Limnol.* 31(2): 93-103. (With Engl.s.). – (Unité Ecol. Eaux Douces, Fac. Univ. Notre-Dame de la Paix, 61 rue de Bruxelles, B-5000 Namur).
From Waulsort on the Meuse R., Belgium, 3 odon. spp., incl. *Gomphus vulgatissimus*, are reported (Sept. 1989).
- (10418) FERRERAS-ROMERO, M. & A.M. GARCIA-ROJAS, 1995. Life-history patterns and spatial separation exhibited by the odonates from a mediterranean inland catchment in southern Spain. *Vie Milieu* 45(2): 157-166. (With Fr.s.). – (Depto Biol. Animal, Fac. Cien., Univ. Córdoba, Avda San Alberto Magno s/n, ES-14004 Córdoba).
- Population dynamics is analysed in 8 spp. from the Yeguas R. catchment. At least 5 different life history patterns were identified. In the basin studied, the progressive increase in seasonal variation of various abiotic parameters (temperature, velocity) correlates with the decrease in faunal richness, and appears to give rise in the Sierra Morena to the dominance of *Cercion lindenii*, a partly bivoltine sp. – Cf. also OA 7631.
- (10419) *FIELD TRIP HANDBOOK of the 13th International Symposium of Odonatology*, Essen, Germany, August 20-25, 1995.

[Not published: the information is included in the publication listed in OA 10391].

- (10420) GEISTER, I., 1995. *Ljubljansko Barje*. – [The Ljubljana Moor]. Tehniška založba Slovenije, Ljubljana. 200 pp. – ISBN 86-365-0167-9. (Slovene). – Price: SIT 8500.- net. – (Author: Pokopališka pot 13, SI-64202 Naklo). This is a commercial monograph on the famous moor, the largest in this part of Europe (ca 16.000 ha), Slovenia. It includes a reference to some odon. spp., and clarifies/defines Slovene terminology for various moor types and phenomena.
- (10421) GEISTER, I., 1995. *Planinsko društvo Jesenice*. – [The Jesenice Alpine Society]. PD Jesenice, Jesenice, 16 pp. (Slovene). – (Author: Pokopališka pot 13, SI-64202 Naklo). *Aeshna cyanea* is recorded from the alpine localities, "Pusti rovt", "Kočna" and "Hruščanski rovt", all in the Golica range, Karavanke Mts, Slovenia.
- (10422) GÖCKING, C., 1995. Beobachtungen an den Libellen (Odonata) des Oberspreewaldes. *Ent. Nachr. Ber.* 39(1/2): 93-94. – (Dahlweg 87, D-48153 Münster). In Aug. 1992, 22 spp. were recorded at 11 localities in the Spreewald, distr. Cottbus, Germany. Brief comments on the collection are presented.
- (10423) GRACILE. [Newsletter of Odonatology]. Published by the Kansai Research Group of Odonatology, Osaka, No. 53 (July 1, 1995). (Jap., with Engl. titles). – (Distribution outside Japan: K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545, JA). Inoue, K.: A discussion on the phylogeny of Odonata basing on the analysis of body patterns. 1. Japanese taxa (pp. 1-18; incl. exhaustive Engls.); – Arai, Y.: Some ecological observations of *Pantala flavescens* in Saitama prefecture (pp. 19-22); – Hisakawa, T. & S. Tsuda: A small collection of dragonflies from Lampung State, South Sumatra, Indonesia (pp. 23-26); – Nishiura, N.: 4 species of Odonata recorded in Sennan district (Osaka prefecture), 1994 (p. 27); – Kuwahara, H.: Larvae of *Tramea transmarna euryale* caught in Amami island (p. 28); – Yokota, H.: *Epithea marginata* first found at Shirokita Park, Osaka city (p. 28); – Yamamoto, T.: Supplement on the removal of self-disciplined collecting prohibition of dragonflies at Mizorogaike pond (pp. 29-30); – Tani, K.: Congratulations to Mr Yorio Miyatake for his appointment to the Curator of the Osaka Museum of Natural History (p. 31).
- (10424) GRAHAM, J.B., R. DUDLEY, N.M. AGUILAR & C. GANS, 1995. Implications of the Late Palaeozoic oxygen pulse for physiology and evolution. *Nature, Lond.* 375(6527): 117-120. – (First Author: Marine Biol. Res. Div., Scripps Instn Oceanogr., Univ. California, San Diego, La Jolla, CA 92093-0204, USA). The late Palaeozoic was marked by significant changes in atmospheric chemistry and biotic composition. Geochemical models suggest a marked increase and then decline of atmospheric oxygen and associated shifts in the concentration of carbon dioxide. Although the actual magnitude of these changes is uncertain, the pulse of oxygen concentration may have reached a maximum of 35% and then dropped to 15% (compared with the present 21%). This oxygen pulse may have influenced the evolution of major groups of organisms. Since the insect tracheal respiratory is based on diffusive oxygen permeation, the increased oxygen concentrations could have triggered the appearance of gigantism, such as known in the Carboniferous protodonates. With the reduction of the atmospheric O₂ concentration, the oversized forms have disappeared. – (Abstracter's Note: On 8 July 1980, Professor Dr D.A.L. Davies deposited in the Kiauta Library a draft of his never published manuscript, dealing with the same subject and titled, "How did the Pterosaur soar?". In this work he arrived at an opposite suggestion: during Palaeozoic periods of reduced atmospheric pressure "a much greater wing area would be needed to gain any purchase in rarefied air and relatively little muscle power would be needed to flap a large wing". The situation in the odon. he expressed in the form of a verse, which is quoted here for the sake of record: "*Protodonata of old./ Protodonata of old/ Flew in more rarefied air./ Flew in more rarefied air./ Though Meganeura with its thirty inch span/ Was greater than mecistogasterid's clan./ The latter is better for thicker air than/ The Prot-odonata of old.*").
- (10425) HAASE, P. & M.P.D. MEIJERING, 1995. Zur Makroinvertebratenfauna eines naturnahen Bergbaches in Nordhessen. *Lauterbornia* 20: 65-

- 75. (With Engl.s.). – (First Author: Marzhäuser Str. 6, D-37133 Reckershausen).
Cordulegaster bidentata is reported from a stream nr Witzenhausen, Hessen, Germany.
- (10426) HAGENIA. *Mitteilungsblatt des Nationalen Büros der SIO in der Bundesrepublik Deutschland und der GdO*, No. 10 (Sept. 1, 1995). – (c/o M. Schorr & U. Krüner, p/a Waldfrieden 25, D-54314 Zerf).
 On 18 pp., there are over 30 notes, reports, minor articles, announcements, etc., organised under the traditional section headings. The issue also contains 3 faunistic notes, viz. *Werzinger, S. & J. Werzinger*: *Gomphus vulgatissimus* an oberfränkischen Flüssen (pp. 13-14); – *Fliedner, H.*: *Erythromma viridulum* erobert jetzt auch Inseln (pp. 14-15), and – *Burbach, K.*: *Einflug der Schabrackenlibelle (Hemianax ephippiger) in Südbayern* (pp. 15-16). – (*Abstracter's Note*: The journal commenced publication on 1 March 1991 [cf. *OA* 7712], the present issue, therefore, marks the completion of the first half of its first decade of life. The appearance of the newsletter is proverbially punctual, its organisation well balanced throughout, and the amount of diverse kinds of information contained in each issue is amazing. The Eds certainly have to be congratulated on their outstanding performance and services to the odonatol. community).
- (10427) HANEL, L., 1995. *Metodika sledování výskytu vážek (Odonata)*. – *Monitoring of dragonflies in the Czech Republic*. Agent. Ochr. Přír. Krajiny, Praha. 76 pp. + lay-in blank for odon. mapping in Czech Rep. – ISBN 80-901855-1-7. (Czech, with Engl.s.). – (CZ-257 62 Kladruby 33).
 This is a "handbook" for identification, mapping of, and monitoring to the Czech fauna. It contains brief chapters on morphology and biology, a review of the regional spp. (73), an outline of the monitoring methodology, a key to the adults, and a selected bibliography. The work is richly illustrated; 8 col. pls are enhancing its attractive appearance.
- (10428) HATTO, Y., 1995. "Buri" oder "Toriko", eine traditionelle japanische Methode, Libellen zu fangen. Hand-out 13th Int. Symp. Odonatol., Essen. 1 p. – (4-17-19 Yakumo, Meguro-ku, Tokyo, 125, JA).
 Illustrated descriptive abstract. – Cf. *Odonatologica* 23(1994): 283-289.
- (10429) [HATTO, Y.], 1995. Dragonfly catching is a traditional Japanese pastime. *Monthly Meguro* 86 (August): 4. – (c/o Y. Hatto, 4-17-19 Yakumo, Meguro-ku, Tokyo, 152, JA).
 A biographic note (with a portrait) on Yuichi Hatto and his toriko work. – Cf. *OA* 9988, 10160.
- (10430) HAWKING, J.H. & T.R. NEW, 1995. Development of eggs of dragonflies (Odonata: Anisoptera) from two streams in north-eastern Victoria, Australia. *Aquatic Insects* 17(3): 175-180. – (First Author: Murray-Darling Freshw. Res. Cent., P.O. Box 921, Albury, NSW 2640 AU).
 The subject was studied in 6 spp. by incubating eggs over a range of temperatures, comparable to that found in the 2 streams (Kiewa R., Middle Creek). The eggs of each sp. developed directly, rate increasing with temperature. There appeared to be differences in the lower developmental threshold temperatures of the coexisting gomphid and libellulid spp.
- (10431) HILLERMAN, T., 1995. *Der Junge, der die Libelle schuf. Ein Märchen der Zuni*. Fischer Taschenbuch Verlag, Frankfurt/Main. 110 pp. – ISBN 3-596-80110-9.
 German edn of the work described in *OA* 6990.
- (10432) IMAMURA, N., 1995. Creating ponds for dragonflies is the first step to revitalise our home town. *Nature & Insects* 30(8): 19-23. (Jap., with Engl. title). – (Author's address not stated).
 [Abstract not available].
- (10433) INDEN-LOHMAR, C., 1995. A five year population study on *Pyrrhosoma nymphula* (Sulzer). Hand-out 13th Int. Symp. Odonatol., Essen. 1 p. – (Bechbitze 25, D-53797 Lohmar).
- (10434) INOUE, K., 1995. Dragonfly park in a sewage treatment plant. *Nature & Insects* 30(8): 14-18. (Jap., with Engl. title). – (5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545, JA).
 [Abstract not available].
- (10435) ISHIZAWA, N., 1995. Observations on migrating *Sympetrum frequens* Selys (Libelluli-

- dae, Odonata). *Gekkan-Mushi* 293: 22-27. (Jap., with Engl. title). – (Yamaguchi 1644-15, Tokorozawa-shi, Saitama, 359, JA).
[Abstract not available].
- (10436) KIMIYAKI, Y., 1995. Kingdom of Dragonfly Saga City. *Nature & Insects* 30(8): 4-7. (Jap., with Engl. title). – (Author's address not stated).
[Abstract not available].
- (10437) KÖNIGSTEDT, D.G., H. WEGNER & F. RÖBBELEN, 1995. Zum Vorkommen der Südlichen Mosaikjungfer (*Aeshna affinis* Vander Linden, 1820) im brandenburgischen Elbetal. *NatSchutz LandschPfl. Brandenburg* 1995(2): 33-37. – (First Author: Naturschutzzentrum Tripkau, Hauptstr. 45, D-19273 Tripkau/Neuhaus). In 1994, the sp. was recorded at 5 localities in the Elbe R. Valley, Brandenburg, Germany.
- (10438) KOTARAC, M., 1995. Delo odonatološke skupine. – [The achievements of the Odonata team]. In: M. Bedjanič, [Ed.], Tabor študentov biologije: Raka 92, Smast 93, Črneče 94, pp. 22-23, ZOTKS-Gibanje znanost mladini, Ljubljana. (Slovene). – (Antoličičeva 1, SI-62204 Miklavž-na-Dravskem-polju).
29 odon spp., collected Aug. 1992 at 17 localities in the Raka area, Slovenia, are listed along with locality data and some species-wise annotations. – Cf. also *Notul. odonatol.* 4(1993): 1-4.
- (10439) KOTARAC, M., 1995. Kačji pastirji Pohorja. – Dragonflies of Pohorje. *Proteus, Ljubljana* 57(9/10): 336-369, 407. (Slovene, with Engl.s.). – (Antoličičeva 1, SI-62204 Miklavž-na-Dravskem-polju).
A brief review of the spp. and habitats, Slovenia. – Cf. also *OA* 9425.
- (10440) KOTARAC, M., 1995. Poročilo o delu odonatološke skupine. – [A report on the work of the Odonata team]. In: M. Bedjanič, [Ed.], Tabor študentov biologije: Raka 92, Smast 93, Črneče 94, pp. 52-54, ZOTKS-Gibanje znanost mladini, Ljubljana. (Slovene). – (Antoličičeva 1, SI-62204 Miklavž-na-Dravskem-polju).
A checklist of 22 spp., collected Jul.-Aug. 1993 at 21 localities in the upper Soča (Isonzo) R. Basin, Slovenia. A list of localities is stated, but the provenience of the respective spp. is not indicated.
- (10441) [KOTARAC, M.] Z.L.-D., 1995. V Beli krajini našli novo vrsto kačjega pastirja. – [A new dragonfly species recorded from White Carniola, Slovenia]. *Delo* 36 (issue of 27 July): 4. (Slovene). – (Antoličičeva 1, SI-62204 Miklavž-na-Dravskem-polju).
A note in a national daily, referring to the discovery of *Lestes macrostigma* in Slovenia, based on an interview with the President of the Slovene Odonatological Society.
- (10442) [LANJOUW, H.], (Nb), 1995. Stroomdallandschap Drentse A en Hindrik Lanjouw. *Noorderbreedte* 95(3): 97-99. (Dutch).
A biographic sketch of H. Lanjouw, the former Forestry Ranger and odon. recorder at the "Stroomdallandschap Drentse A" Nature Park, the Netherlands.
- (10443) *LIBELLENNIEUWSBRIEF*. Hilversum, Vol. 3, No. 4 (July, 1995). (Dutch). – (c/o V. Kalkman, Van Hogendorpstraat 11, NL-1215 EG Hilversum).
Major signed articles: *Tieleman, I.*: Exuviae of *Enallagma cyathigerum* and *Libellula quadrimaculata* (pp. 4-5); – *Van der Weide, M.*: The Gomphus fieldtrip to the Meuse R. (p. 6); – *Orthetrum coerulescens* at the foot of St Jansberg (Limburg) again (pp. 6-7); – *De Knijf, G.*: *Crocothemis erythraea* and *Cercion lindenii*: at present common in Belgium, before long perhaps also in the Netherlands? (pp. 7-12); – *Hospers, M. & A. Hospers*: The *Calopteryx* occurrence in the Twente frontier area (pp. 12-14).
- (10444) *LINDENIA*. *Notiziario dell'Ufficio nazionale italiano della Società odonatologica internazionale*, Roma, No. 24 (July 1, 1995). – (c/o Prof. Dr C. Utzeri, Dipto Biol. Anim. & Uomo, Univ. Roma "La Sapienza", Viale dell'Università 32, I-00185 Roma).
[Utzeri, C.]: Workshop sugli odonati durante il XX Congresso internazionale di Entomologia (p. 107); – Archivio Hemianax (p. 107); – Bibliografia (p. 108); – *D'Antonio, C.*: La *Lindenia* (p. 108).
- (10445) LIPEJ, L., 1995. Ugovor ekološke vesti.

[Protest of the ecological conscience]. *Proteus, Ljubljana* 57(7): 291-292. (Slovene). – (Author's address not stated).

A comprehensive review of the work listed in OA 10216.

- (10446) LOHMANN, M., 1995. *Käfer, Libellen und andere Insekten bestimmen auf einen Blick, mit Falzplan*. BLV Verlagsgesellschaft, München-Wien-Zürich. 191 pp., fold. pl. excl. – ISBN 3-405-14727-1. – (Publishers: Postfach 400320, D-80703 München).

A very general fieldguide, with beautiful col. photos and concise descriptions, and ecology and life history data on the spp. dealt with. It covers 21 common European odon. spp. (pp. 48-65).

- (10447) MATSUKI, K., M. SUGIMURA & K. NAGAMINE, 1995. Description of the larva of *Chlorogomphus bruneus keramensis* Asahina, 1972 (Cordulegastriidae, Odonata). *Gekkan-Mushi* 291: 28-29. (Jap., with Engl. title & fig. captions). – (First Author: 1575-14, 3-chome, Hasama-cho, Funabashi-shi, Chiba, 274, JA). The description and figs of ultimate instar.

- (10448) MATTSO, R.A., J.H. EPLER & M.K. HEIN, 1995. Description of benthic communities in karst, spring-fed streams of North-central Florida. *J. Kans. ent. Soc.* 68(2/Suppl.) 18-41. – (Second Author: Rt 3, Box 5485, Crawfordville, FL 32327, USA). Includes a checklist of 20 identified odon. spp. from the spring-influenced reaches of the Suwannee R. drainage (1989-1991), Florida, USA.

- (10449) McPEEK, M.A., 1995. Testing hypotheses about evolutionary change on single branches of a phylogeny using evolutionary contrasts. *Am. Nat.* 145(5): 686-703. – (Dept Biol. Sci., Dartmouth Coll., Hanover, NH 03755, USA). Interspecific comparisons of phenotypes are used extensively to test hypotheses about the evolutionary forces shaping phenotypic variation, but comparative data analysis is complicated by correlations due to the common ancestry of spp. The method of evolutionary contrasts removes such correlations by estimating the amount of character change between pairs of closely related spp. that has occurred since their most recent common ancestors. The original method allows character

change to be estimated only along pairs of branches on a phylogeny, but many hypotheses address change along single branches. In this article the method of evolutionary contrasts is extended to allow character change along a set of single branches on a phylogeny to be estimated, expected variances are presented, and it is shown that these extensions also result in a set of contrasts that are not correlated because of common ancestry. These extensions will allow hypotheses to be tested concerning character change associated with host or habitat shifts, changes in breeding system (e.g. monogamy vs polygyny, monoecy vs dioecy), changes in life history (e.g. semelparity vs iteroparity), and changes in quantitative characters in many other situations in which one is interested in character change along single branches. The hypotheses about single characters are tested on the example of the North American *Enallagma* spp.

- (10450) MIZUBE NO TOMODACHI, Saga, No. 4 (Apr. 10, 1995). (Jap.). – (c/o Prof. Dr K. Higashi (Dept Biol., Coll. Liberal Arts, Saga Univ., 1 Honjo, Saga, 840, JA). Contains 23 notes and small papers. – For general information cf. OA 10370.

- (10451) MOORE, N. [W.], 1995. Damsels & dragons. *Earth Matters* 27: 8-9. – (Farm House, 117 Boxworth End, Swavesey, Cambridge, CB4 5RA, UK). General, with emphasis on the importance of dragonflies for the environment quality assessment in Britain.

- (10452) MORI, S., 1995. Eco up strategy on dragonfly in Yokohama City. *Nature & Insects* 30(8): 24-29. (Jap., with Engl. title). – (Author's address not stated). [Abstract not available].

- (10453) NEUBAUER, K. & G. REHFELDT, 1995. Roosting site selection in the damselfly species *Calopteryx haemorrhoidalis* (Odonata: Calopterygidae). *Entomol. gener.* 19(4): 291-302. (With Germ.s.). – (Second Author: Roseggerweg 41, D-38304 Wolfenbüttel). The paper is based on the work at an irrigation canal on the Crau, Bouche du Rhône, France. Activity began within 90 min after sunrise. Age

and sex structure of roosting groups on sites used at night was determined. The activity range of marked individuals between perch used during the day and roosting site on leaves of bushes at the bank were recorded. Roosting sites of individuals of all age stages and both sexes were clustered. The individual roosting locations varied from night to night. Mortality during the night was low (0,12%). Almost all damselflies spent the night sitting more or less exposed on leaves, but various weather conditions resulted in changed preferences for roosting site height above the ground.

- (10454) NOMURA, S. & M.Z. ALAM, 1995. A list of dragonflies collected in Bangladesh. *Esakia* 35: 135-140. – (First Author: Ent. Lab., Fac. Agric., Kyushu Univ., Fukuoka, 812, JA). A list (with collection data) of 17 spp., identified by Dr S. Asahina.

- (10455) ORENDT, C., 1995. Die Evertebratenfauna eines Seitengewässer-Systems der Alz/Inn bei Altenmarkt/Oberbayern mit Nachweis von *Setodes argentipunctellus* (McLachlan), einer "ausgestorbenen" Köcherfliegenart. *Lauterbornia* 20: 55-63. (With Engl.s.). – (Hildegardstr. 13, D-80539 München).

3 odon. spp. are reported from the Floderbach stream, nr Altenmarkt, Upper Bavaria, Germany.

- (10456) PAPAŽIAN, M., 1995. Les odonates de Camargue. *Entomologiste* 51(3): 117-128. – (23, bd de Roux Prolongé, F-13004 Marseille). A commented review and analysis of the fauna (38 spp.) of this "classical" region in France.

- (10457) PAULSON, D.R. & S.W. DUNKLE, 1995. *Proposed English names for the Odonata of North America*. 10 pp. Privately published and circulated with *Dragon-Flier* 5(4), Sept. 1995. – (First Author: Slater Mus. Nat. Hist., Univ. Puget Sound, Tacoma, WA 98416, USA). A revised and updated version of the work listed in OA 4334.

- (10458) PENNINGTON, M.G., 1995. The Common Blue Damselfly *Enallagma cyathigerum* and other Odonata records in Shetland. *Ent. Rec. J. Var.* 107(7/8): 165-170. – (9 Daisy Park, Baltasound, Unst, Shetland, ZE2 9EA, UK).

The vagrant individuals of *Aeshna juncea*, (1 ♂, Fair Isle, 24-VII-1955), *Hemianax ephippiger* (specimen "obtained on Fetlar in about 1970") and *Libellula quadrimaculata* (Fair Isle, VII-1958) are brought on record. *E. cyathigerum* is the sole odon. sp. breeding in Shetland. Its occurrence in 9 10-km squares in the island is reviewed and mapped, and notes on the habitats are presented.

- (10459) PRASAD, M. & R.K. VARSHNEY, 1995. A check-list of the Odonata of India including data on larval studies. *Oriental Insects* 29: 385-428. – (Zool. Surv. India, Prani Vigyan Bhavan, M-Block, New Alipore, Calcutta-700053, India). 499 spp. and sspp. are listed along with bibliographic references and statements on their State-wise distribution. Some synonymy is included. The larvae are known of 76 spp., but the life history has been studied in 15 spp. only. The Bibliography is rather comprehensive, though still greatly incomplete.

- (10460) *PROGRAM AND GENERALITIES of the 13th International Symposium of Odonatology, Essen, Germany, August 20-25, 1995.* [Not published; the information is included in the publication listed in OA 10391].

- (10461) REN, D. et al., 1995. *Faunae and stratigraphy of Jurassic-Cretaceous in Beijing and the adjacent areas*. Seismic Publishing House, Beijing. viii+222 pp., pls 1-32 excl. – ISBN 7-5028-1234-2/P. 766. (Chin., with Engl.s on pp. 177-206). – (Author: Geol. Mus. China, Xisi, Beijing-100034, P.R. China). Contains the descriptions and illustrations of *Sinaeschnidia cancellosa* sp.n. (Aeschnidiidae) and *Hemeroscopus baissicus* Pritykina (Hemerosciopidae).

- (10462) RETTIG, K., 1995. Naturkundliche Beobachtungen im Hochmoorgebiet des Dreiländer- ecks Ostfriesland/Oldenburg/Emsland. *Beitr. Vögel- Insektenwelt Ostfrieslands* 83: 14-15. – (Danziger Str. 11, D-26725 Emden). 7 odon. spp. are reported from the Drose-Moor rised bog area, Ostfriesland, Germany. Statements on their respective abundance are included.

- (10463) SAHLEN, G., 1995. *The insect eggshell: ultrastructure, organisation and adaptive traits*

in *Odonata and Diptera*. Acta Univ. Upsaliensis, Uppsala. 27 pp. [Comprehensive Summaries Uppsala Diss. Fac. Sci. Technol. 111]. – (Sect. Ent., Dept Zool., Uppsala Univ., Villavägen 9, S-752 36 Uppsala).

A comprehensive and illustrated summary edn of the PhD work listed in OA 10312.

placed in fast-flowing water developed significantly faster and showed significantly lower mortality than eggs placed in slow-flowing water. A major factor determining this difference was the deposition and growth of encrusting algae which prevented the successful hatching of eggs in slow-flowing water.

- (10464) [SCHMIDT, E.] ah, 1995. Libellen-Forscher aus aller Welt tagen in der Uni. *Westdeutsche Allgemeine* 1995(194): 16. – (Biol. Didaktik, FB-9, Univ. Essen, Postfach 103764, D-45117 Essen).

A regional daily's interview with the Organising Secretary of the 13th Int. Symp. Odonatol., Essen (Germany), Aug. 20-25, 1995. – For abstracts of papers cf. OA 10391.

- (10465) SCHNEIDER, W., 1995. Der Darmstädter Zoologe Johann Jakob Kaup (1803-1873) als Autor einiger Libellentaxa (Odonata: Anisoptera: Aeshnidae, Libellulidae). *Ent. Z., Essen* 105(13): 253-256. (With Engl.s.). – (Zool. Abt., Hessisches Landesmus., Friedenspl. 1, D-64283 Darmstadt). It is shown that the author of 1 aeshnid and 6 libellulid spp., introduced by Brauer in 3 subsequent publications (1866-1867), is J.J. Kaup. In accordance with the 1985 Code (Recomm. 51B), the correct citation of these should read as follows: *Gynacantha rosenbergi* Kaup in Brauer, 1867; *Tramea loewii* Kaup in Brauer, 1866; *Protorthemis coronata* (Kaup in Brauer, 1866); *Neurothemis decora* (Kaup in Brauer, 1866); *N. ramburii* (Kaup in Brauer, 1866); *Lathrecista pectoralis* (Kaup in Brauer, 1867), and *Macrodiplax cora* (Kaup in Brauer, 1867), resp.

- (10466) SIVA-JOTHY, M.T., D.W. GIBBONS & D. PAIN, 1995. Female oviposition-site preference and egg hatching success in the damselfly *Calopteryx splendens xanthostoma*. *Behav. Ecol. Sociobiol.* 37(1): 39-44. – (First Author: Dept Anim. & Plant Sci., Univ. Sheffield, Sheffield, S10 2UQ, UK).

By removing ♂♂ and controlling the rate of water flow past oviposition patches in an experimental area (Vidourle R., S France; cf. OA 8708), it was shown that ♀♀ *C. s. xanthostoma* preferred to oviposit in fast flowing water rather than slow flowing water. A series of manipulations revealed the fitness benefits to ♀♀ for this preference: eggs

- (10467) STEYTLER, N.S. & M.J. SAMWAYS, 1995. Biotope selection by adult male dragonflies (Odonata) at an artificial lake created for insect conservation in South Africa. *Biol. Conserv.* 72: 381-386. – (Zool. & Ent., Fac. Sci., Univ. Natal, Private Bag X01, Scottsville, Pietermaritzburg-3209, SA).

A large pond at the Natn. Bot. Gard., Pietermaritzburg was created as part of an ecological landscaping urban project for plant and insect conservation. Biotope preference by resident adult male dragonflies was used to determine the conservation value of the created conditions. Various biotopes were created to cater for the apparent preferences of adult ♂ dragonflies. Stenotopic spp. were highly sensitive to a number of factors such as sunlight or shade, to still or flowing water, and to vegetation structure. The provision of a wide range of appropriate biotopes was shown to increase local species richness more than 2-fold, but with loss of one riverine sp. that was formerly present. Most of the colonisers were eurytopic and vagile, but some were more local, stenotopic spp.

- (10468) SUGIMURA, M., 1995. First Dragonfly Park in the world: history and future view. *Nature & Insects* 30(8): 8-13. (Jap., with Engl. title). – (Shimanto Tombo Shizenkan, 8055-5 Gudoh, Nakamura-shi, Kochi, 787, JA). Deals with the Author's institution. – Cf. also e.g. OA 7424, 9819.

- (10469) SUHLING, F., 1995. Temporal patterns of emergence of the riverine dragonfly *Onychogomphus uncatatus* (Odonata: Gomphidae). *Hydrobiologia* 302: 113-118. – (Zool. Inst., Univ. Braunschweig, Pockelsstr. 10a, D-38106 Braunschweig). The emergence patterns at 3 localities, situated at 2 adjacent canals in S France, are compared. While 50% of annual emergence from 2 localities on 1 canal occurred after 25 and 36 days, resp., it had taken place only after 5 days at the second canal,

where emergence began 14 days earlier. At the latter canal most larvae of a generation overwintered in the final instar, while at the first canal only half of the population did so. The differences correlate with temperature fluctuations, which are responsible for high temporal synchronisation. Other factors that may cause differences in seasonal regulation, such as drying up and density, are discussed. Differences exist also in sex ratio and abundance of emerging individuals.

- (10470) *SULZBACH-ROSENBERGER LIBELLEN-RUNDBRIEF*, No. 2 (July, 1995). – (c/o R. Seidenbusch, Klenze Str. 5, D-92237 Sulzbach-Rosenberg).

Seidenbusch, R.: Die Bedeutung von Messrelationen für eine exakte Determination von Exuviae (pp. 1-2); – Comparison of the last instar larvae of *Stylurus flavipes flavipes* Charpentier, 1825, *Stylurus flavipes lineatus* Bartenev, 1929, *Anomogomphus kiritchenkoi* Bartenev, 1913, *Gomphus davidi* Selys, 1887 (Anisoptera: Gomphidae) (pp. 3-6); – Comparison of the last instar larvae of *Gomphus vulgatissimus* Linnaeus, 1758, *Gomphus schneideri* Selys, 1850, *Gomphus epophthalmus* Selys, 1872 (pp. 7-9); – Comparison of the last instar larvae of *Gomphus pulchellus* Selys, 1840, *Gomphus lucasi* Selys, 1849, *Gomphus simillimus* Selys, 1940 (Anisoptera: Gomphidae) (pp. 10-13); – Comparison of the last instar larvae of *Onychogomphus flexuosus* Schneider, 1845, *Onychogomphus forcipatus albotibialis* Schmidt, 1954 (Anisoptera: Gomphidae) (pp. 14-15); – Comparison of the last instar larvae of *Onychogomphus forcipatus unguiculatus* Vander Linden, 1823, *Onychogomphus costae* Selys, 1885 (Anisoptera: Gomphidae) (pp. 16-17).

- (10471) UCHIDA, M., 1995. The present condition and the coming way of Yorii Dragonfly Park. *Nature & Insects* 30(8): 30-34. (Jap., with Engl. title). – (Author's address not stated).
[Abstract not available].

- (10472) VAN ZANTEN, I. & H. DEKKER, 1995. *Sporen voor later. Onderzoek naar voorkomen, bedreiging en beheer van zeldzame plante- en insectensoorten in Drenthe*. – [Inquire into the occurrence, threats to and management of rare plant and insect species in the province of Drenthe]. Minist. Landbouw, Assen. xii+292 pp. – ISBN

90-75469-01-2. (Dutch). – (Publishers: Ministerie v. Landbouw, Directie Noord, P.O. Box 146, NL-9400 AC Assen).

Contains the provincial odon. Red List (19 spp.), the Netherlands (Dutch nomenclature only).

- (10473) VIESSMANN, R., 1995. *Libellen Odonata. Jber Pflanzen Tiere Rheinland-Pfalz* 1994(5): 139-146. – (Gängelstockweg 8, D-67295 Bolanden).

A checklist of 38 spp., with locality data and annotations on their abundance; Rhineland-Palatinate, Germany. *Lestes barbarus*, *Coenagrion mercuriale*, *Crocothemis erythraea*, etc. are among the regionally more interesting taxa.

- (10474) VONWIL, G., 1995. Ein aargauisches Schutzgebiet, wo sich Vögel und Libellen wohl fühlen. *Entlang der Stillen Reuss. Ornith.* 1995(3): 11-13. – (Oberdorf, CH-6042 Dietwil).

Includes a reference to *Erythromma viridulum*, *Anaciaeschna isosceles*, *Crocothemis erythraea* and *Leucorrhinia caudalis*; "Stille Reuss" Nature Reserve, canton Aargau, Switzerland.

- (10475) WEISHEIT, K., 1995. Einjährige Entwicklung der Pionierart *Libellula depressa* (Odonata: Libellulidae). *Ent. Nachr. Ber.* 39(1/2): 94-95. – (Gauss-Gymn., Gartenstr. 2, D-15230 Frankfurt/Oder).

Between Aug. 1992-Oct. 1993, larval development of a *L. depressa* population was systematically monitored in a garden pond (probably at Frankfurt/Oder, but the locality is not stated). By Oct. 1992, 25% of the larvae have reached the ultimate stage, while normally it is not reached until close prior to the second hibernation. The circumstances that may have triggered the life history shortening are discussed and references are made to a similar phenomenon described earlier in some other spp.

- (10476) WICHARD, W., W. ARENS & G. EISENBEIS, 1995. *Atlas zur Biologie der Wasserinsekten*. Fischer, Stuttgart-Jena-New York. x + 338 pp. (912 REM figs on 148 pls, 156 textfigs incl.). ISBN 3-437-30743-6. – Price: DEM 128.- net.
The work is considered an "extension" to C. Wesenberg-Lund's classical, "*Biologie der Süßwasserinsekten*" (1943). The odon. are dealt with on pp. 38-61. A concise "monographic" treat-

ment of the Order is accompanied by 72 REM photos and numerous textfigs. Some of the illustrations and/or text sections were provided by H. Bellman, R. Rudolph, E. Schmidt, K. Sternberg, etc.

- (10477) WILDERMUTH, H., 1995. Libellen: Über Teufelsnadeln und Augenstecher. Eleganz auf vier Flügeln. *Ornis* 1995(3): 4-9. – (Haltberg 43, CH-8630 Rüti).
General, with emphasis on Swiss fauna (81 spp., of which only 25 spp. are not threatened).
- (10478) YANG, Z.-d. & S.-s. LI, 1995. A new species of protoneurid damselflies from Shaanxi, China (Odonata: Protoneuridae). *Acta zootaxon. sin.* 20(3): 339-341. (Chin., with Engl. descr. &

fig. captions). – (Biol. Dept, Hanzhong Teachers' Coll., Hanzhong, Shaanxi prov., 723001, P.R. China).

P. hanzhongensis sp.n. is described and illustrated (holotype ♂, 2 ♂ paratypes: Zhenba Co., Shaanxi, 29-VIII-1987; deposited in Authors' institution). It is compared with *P. theebawi* Fraser.

- (10479) ZESSIN, W., 1995. *Hagen-Vorhalle (Namurian, Upper Carboniferous; FR Germany), the oldest Odonata-bearing of the world*. Hand-out 13th Int. Symp. Odonatol., Essen. 14 pp. – (Lange Str. 7, D-19230 Jasnitz).
A detailed description of the Symp.-Trip to the locality, with maps and figs of the fossil odon. – (Cf. OA 10341, 10360).