ODONATOLOGICAL ABSTRACTS

1972

(4346) STELLA, E., F.G. MARGARITORA, G.B. PALMEGIANO & M. BAZZANTI, 1972.Il Lago di Martignano: prime osservazioni sulla struttura e distribuzione delle biocenosi. *Rend. Accad. naz. XL.* (IV) 22: 1-17. (With Fr. & Engl. s's.). — Ist. Zool., Univ. Roma, Viale dell'Università 32, I-00100 Roma).
Ischnura elegans is listed from the Martignano Lake, Lazio, Italy.

1976

(4347) CHAMBERS, S., 1976. Damselflies. *N.Z. Farmer* 97: 7. — (Author's address not stated).
A popular account of 3 zygopteran spp. from New Zealand.

(4348) COTTON, W.C., 1976 [reprint]. *A manual for New Zealand bee keepers.* [Originally published by Spectator, Wellington, 1848] Newrick, Wellington. 112 pp. — (Publishers: P.O. Box 820, Wellington, NZ).
On p. 93, a paragraph relates dragonfly predation on bees.

(4349) KELSO, J.R.M. & F.J. WARD, 1976. Unexploited percid populations of West Blue Lake, Manitoba, and their interactions. *J. Fish. Res. Board Can.* 34: 1655-1669. (With Fr. s.). — (First Author: Dept Fish. & Environ., Great Lakes Biolimnol. Lab., Sault Ste Marie, Ont. P6A 2B3, CA).
Contains quantitative data on the occurrence of Odon. in the stomach contents of the perch populations studied.

1977

(4350) ALFINITO, S., M. BAZZANTI, G. BAZZICHELLI, L.D.'ALESSANDRO, O. FERRARA, B. FUMANTI, E. LUPIA PALMIERI, F. MARGARITORA, U. PIECHE & E. STELLA, 1977. Indagini ecologiche sul Lago di Giulianello (Lazio). *Annali Bot.* 35/36: 201-334. — (Second Author: Ist. Zool., Univ. Roma, Viale dell'Università 32, I-00100 Roma.
On p. 318, 5 odon. spp. are listed from the Giulianello Lake, Lazio, Italy.

(4351) BAILLY-CHOUMARA, H., 1977. Bibliographie entomologique marocaine rétrospective de 1870 à 1975 inclus. *Docum. Inst. sci. Univ. Mohammed V, Rabat* 1: X+216 pp. — (c/o Inst. Sci. Univ. Mohammed V, Rabat, Morocco).
The odon. bibliography (18 titles) appears on pp. 187-188.

(4352) BREDENBEEK, J., 1977. Libellen in de Meintjes. — [Dragonflies in the Meintjes]. *Tijgervel* 1977 (3): 1-5. (Dutch). — (Author's address not stated).
19 spp. are listed from "de Meintjes" Nature Reserve nr Terwolde, The Netherlands. Erythromma viridulum is of particular interest.

(4353) JOHNSON, F.H. & J.G. HALE, 1977. Interrelations between Walleye (Stizostedion vitreum vitreum) and Smallmouth Bass

(Micropterus dolomieui) in four northeastern Minnesota lakes, 1948-69. *J. Fish. Res. Board Can.* 34: 1626-1632. (With Fr. s.). — (First Author: Div. Fish. & Wildlife, Minnesota Dept Nat. Res., St. Paul, Minn. 55155, USA).
Contains quantitative data on the occurrence of Odon. in the stomach contents of the 2 fish spp.

(4354) LAKE, P.S. & C. BENNISON, 1977. Observations on the food of freshwater fish from the Coal and Jordan Rivers, Tasmania. *Pap. Proc. R. Soc. Tasm.* 111: 59-67. — (First Author: Dept Zool., Monash Univ., Clayton, Victoria, Tasmania, AU).
Quantitative data are given on the Odon. recovered from the stomach contents of Salmo trutta, Anguilla australis, Perca fluviatilis, Tinca tinca, and Retropinna tasmanica.

1978

(4355) HOPF, A. & A. HOPF, 1978. *Alte Exlibris.* Die Bibliophilen Taschenbücher, Harenberg Kommunikation, Dortmund. 238 pp.
On p. 199, there is a colour reproduction of a dragonfly bookplate, by Alfred Cossmann (for H. Ehrenfeld), undated. (Cf. also *OA* No. 1919).

1980

(4356) COMPTE, A., 1980 El V Simposio Internacional de Odonatología, celebrado en Sainte-Thérèse (Canadá) (5-11 agosto 1979). *Graellsia* 34 [1978]: 253-257. — (Inst. Español Entomol., J. Gutiérrez Abascal 2, Madrid-6, ES).
An exhaustive account of the organisation and work of the Symposium. (Cf. *OA* No. 2548).

(4357) LEGRAND, J. & LACHAISE, 1980. Contribution à la faune du Congo (Brazzaville). Mission A. Villiers et A. Descarpentries. CXIII. Odonates: additions et corrections. *Bull. Inst. fr. Afr. noire* (A) 42(3): 586-593. (With Engl. s.). — (Lab. Ent., Mus. Natn. Hist. Nat., 45 rue de Buffon, F-75005 Paris).
13 taxa are added to the list of P. Aguesse (1966, Bull. Inst. fr. Afr. noire (A) 28: 783-797), the allotype ♀ of Ceriagrion sanguinostigma Fr. is described, Sympetrum navasi congoensis Aguesse is elevated to the sp. rank, and earlier misidentifications are corrected.

(4358) TEYROVSKÝ, V., 1980 Einige Bemerkungen über die Odonaten als Komponente der Fauna des mitteleuropäischen Gebirgswaldes. *Pr. kraj. Mus. Hradci Králové* (A) Suppl. 1980: 133-135. (With Engl. s.). — (Author deceased).
The forest eucoenous odon. fauna of the Central European mountains is reviewed and briefly discussed.

1981

(4359) AGUIAR S., 1981. As libélulas da Leitura Nova. *Armas e Troféus* (V) 1(1-3): 6 pp., 3 pls excl. (Port., with Engl. s.). — (Rua Alfredo Cunha 225-2ºE, PT-4450 Matosinhos).
3 dragonfly illuminations from the 16th Cent. heraldic codices of "Leitura Nova" (1504-1552) are reproduced, analysed and taxonomically identified (Calopteryx virgo meridionalis). The original is kept in the Torre do Tombo archives, Portugal.

(4360) BAZZANTI, M., 1981. Survey of the macrobenthic community in an area of Lake Bracciano (central Italy). *Boll. Zool.* 48: 295-303. — (Ist. Zool., Univ. Roma, Viale dell'Università 32, I-00100 Rome).
The lake is situated some 40 km N of Roma. It is mesotrophic and noted for its high yield of fish. 3 odon. spp. are listed.

(4361) BOERSMA, J., 1981. *It wylde wrimelt. List fan ynsektenammen.* 57 pp. Fryske Akad., Leeuwarden. [ISBN 90 6171 588 1]. (Friesian).
A systematically arranged list of insects known to occur in Friesland, The Netherlands. The spp. are listed under their Friesian common names, and the taxonomic names and Dutch synonyms are also provided. The Odon. (44 spp.) appear on pp. 7-10.

(4362) CHOWDHURY, S.H. & M. AKHTERUZ-ZAMAN, 1981. Atypical breeding behaviour of Pantala flavescens (eb.) [sic] (Libellulidae, Anisoptera: Odonata). *Proc. 3rd natn. zool. Conf., Dacca,* pp. 87-89. — (Dept Zool.,

Univ. Chittagong, Chittagong, Bangladesh).
A large number of females were observed ovipositing on a hot asphalt and concrete road surface. The phenomenon is described and its biological significance is discussed.

(4363) [PINHEY, E.] — SKAIFE, S.H., J. LEDGER & A. BANNISTER, 1981. Eintagsfliegen und Libellen. *In:* S.H. Skaife, J. Ledger & A. Bannister, Afrikanische Insekten, pp. 28--36, col. figs 26-29 excl. Perlinger, Wörgl (Austria). [ISBN 3-85399-007-X]. — (Dr E. Pinhey. Wye View Villa, Gloucester Rd, Tutshill, Chepstow, NP6 7DH, UK).
This is a German version of the item listed in *OA* No.2649. The name of the (actual) author of the odon. chapter is not stated in the book.

(4364) SCHIEMENZ, H.,.1981. Odonata — Libellen. *In:* E. Stresemann, [Ed.], Exkursionsfauna für die Gebiete der DDR und der BRD. Bd. 2/1, pp. 64-78. Volk & Wissen, Berlin. — (Author's last known address: Inst. Landesfor. & Naturschutz, Stübelallee 2, DDR-Dresden A 16, GDR).
A concise key to the taxa of the German fauna. Adults only.

(4365) VANNOTE, R., 1981. Production-recruitment model for the predator Calopteryx maculatum. *Progr. & Abstr. 29th ann. Meet. North Am. benthol. Soc., Utah,* p. 10. — (Stroud Water Res. Cent., Avodale, Pa. 19311, USA).
[Title only].

1982

(4366) ALEXANDER, D.E., 1982. Changes in the phase relationship between the fore- and hindwings of flying dragonflies. *Am. Zool.* 22(4): 941 [Abstract]. — (Dept Biol., Duke Univ., Durham, NC, USA). [Verbatim]: Dragonflies have independent fore- and hindwings that function separately. Although 4 narrow wings may have less drag than 2 wide ones of equal area and length, it is widely accepted that insects with 4 narrow wings produce less lift due to aerodynamic interference between fore- and hindwings. Dragonflies, which are strong, agile flyers, usually flap their wings about a half stroke out of phase in order to reduce the aerodynamic interference. I have made high speed movies of dragonflies flying freely and on flexible tethers which show that under certain conditions, dragonflies flap their fore- and hindwings in phase for short periods. Such flapping occurs during situations that require greater than normal lift production, such as during takeoff and extremely fast turns. Flapping in phase may be a response to the adverse effects of the connection of the fore- and hindwing articulations, which become more pronounced in high force situations, rather than a response to aerodyamic factors.

(4367) BAZZANTI, M. & E. LORET, 1982. Macrobenthic community structure in a polluted lake: Lake Nemi (central Italy). *Boll. Zool.* 49: 79-91. — (Ist. Zool., Univ. Roma, Viale dell'Università 32, I-00100 Roma).
3 odon. spp. are listed.

(4368) BEGUM, A., M.A. BASHAR & B.R. BISWAS, 1982. Studies on the biology of Zyxomma petiolatum (Rambur) (Odonata: Libellulidae). *Dhaka Univ. Stud.* (B) 30(2): 131-138. — (Dept Zool., Univ. Dhaka, Dhaka, Bangladesh).
Field observations are given on territorial and reproductive behaviour and all immature stages (eggs and 11 instars), studied in the laboratory, are discribed and figured. The larval development takes 108-122 days.

(4369) BEUERLE, W., 1982. Libellen — farbenfrohe Flugkünstler. *Tierfreund, Nürnberg* 1982 (3): 38-39. — (Author's address not stated).
A general article, directed at the youth.

(4370) BIGGS, B.J.F. & T.J. MALTHUS, 1982. Macroinvertebrates associated with various aquatic macrophytes in the back waters and lakes of the upper Clutha Valley, New Zealand. *N.Z. Jl marine & freshwat. Res.* 16: 81-88. — (First author: Water & Soil Sci. Cent., P.O. Box 1479, Christchurch, NZ).
Larvae of 2 odon. spp. were found. Xanthocnemis zealandica was present in all 6

macrophyte communities sampled, Procordulia grayi in 4. Mollusca and chironomids were the dominant organisms in macrophytes, with X. zealandica being sub-dominant on Lagarosiphon major; this is shown in a histogram

(4371) BLATTER, S., 1982. Kleine Wirbellose unter der Lupe. *In:* A. Meser, [Ed.], Expedition Frosch, pp. 106-120. Aare, Solothurn. — (Author's address not stated).
General article, containing an account on odon. biology (pp. 106-112), but no faunistic data.

(4372) CHAO, H.-f., 1982. Classification of Chinese dragonflies of the family Gomphidae (Odonata), VIII. Description of Nihonogomphus simillimus Chao, sp. nov., from Fujian Province. *Wuyi Sci. J.* 2: 115-117. (Chin., with Engl. s.). — (Inst. Biol. Control, Dept Plant Prot., Fujian Agric. Coll., Fuzhou, Fujian, P.R. China).
N. simillimus sp. n. (♂ holotype: Guangzhe xian, 11-VI-1980; Type No. 013, deposited in Inst. Biol. Control, Fuzhou) is described, figured, and compared with N. lieftincki Chao, N. bequearti Chao and N. semanticus Chao.

(4373) COTHRAN, M.L. & J.H. THORP, 1982. Emergence patterns and size variation of Odonata in a thermal reservoir. *Freshwat. Invertebr. Biol.* 1(4): 30-39. — (Savannah Riv. Ecol. Lab., P.O. Drawer E. Aiken, SC 29801, USA).
Full paper of *OA* 3297.

(4374) FINCKE, O.M., 1982. Mate guarding in a non-territorial damselfly, Enallagma hageni. *Am. Zool.* 22(4): 972 [Abstract]. — (Dept Zool., Univ. Iowa, Iowa City, Iowa 52242, USA).
[Verbatim]: In many odon., females oviposit either in tandem or are guarded by males. Both postcopulatory behaviours are hypothesized to lessen the risk of sperm displacement. Females of E. hageni are accompanied to oviposition site in tandem with males, but are released by males as they submerge to oviposit (for 15-30 min) at the base of plant stems. Males localize and defend the stem for up to 1 hr. It was investigated whether males were guarding their mates or waiting for other mating opportunities or both. Guarding was found to be behaviorally distinct from localization by unmated males at the water. When females prematurely emerged, guarding males were usually successful in recapturing them, thereby preventing take-overs by other males. Males that failed to recapture mates shifted from guarding behaviour to searching for females at the water. Male guarding success is dependent upon the time of day, density of unmated males, and availability of oviposition sites.

(4375) KAPOOR, V.C., 1982. Insects. *In:* T.C. Majupuria, [Ed.], Wild is beautiful. (Introduction to the magnificent, rich and varied fauna and wildlife in Nepal). A compendium during trekking and visiting Wildlife Observatories, pp. 32-35. Devi, Lalitpur. — (Dept Zool., Punjab Agric. Univ., Ludhiana, Punjab, India).
In the paragraph on the Odon. (pp. 32-33), a brief review is given of some of S. Asahina's papers on the Odon. of Nepal, published during 1955-1965,. — (*Abstracter's note:* This is a valuable volume on the fauna of Nepal, unique in its scope, directed at the general, zoologically interested reader. The book (508 pp., 59 col. figs, 45 black-and white photogr., 321 line drawings, 12 maps) should be ordered from the Editor, Prof. T.C. Majupuria, 10A Professor's Quarters, Kirtipur, Kathmandu. Price: US $ 10.—).

(4376) KAY, S.H., P.C. QUIMBY & J.D. OUZTS, 1982. A potential algicide for aquaculture. *Proc. 35th ann. Meet. Southern Weed Sci. Soc., Atlanta,* pp. 275-289. — (First Author: USDA–ARS, Southern Weed Sci. Lab., Stoneville, MS 38776, USA).
Laboratory and field studies were conducted to evaluate hydrogen peroxide (H_2O_2) as a potential algicide for use in commercial catfish ponds and in other aquacultural situations. The larvae of Pachydiplax longipennis could tolerate H_2O_2 levels of 5 mM.

(4377) LÓPEZ PACHECO, R.A. & E. GONZÁLEZ SORIANO, 1982. Estudio preliminar de los

Odonata de Nayarit: I suborden Anisoptera (Insecta: Odonata). *Fol. ent. mex.* 54: 95-96. — (Dep. Zool., Inst.Biol., Univ. Nac. Auton. México, Apdo P. 70-163, 04510 México, D.F., México).
Indicative abstract on a research project on the Odon. of Najarit, Mexico (55 spp.), without a species list.

(4378) MANGOLD, K., 1982. Adolf Portmann (1897-1982). *Vie & Milieu* 32(3): 135-136, portrait excl. (Fr.). — (Lab. Arago, Banyuls-sur-Mer, France).
Obituary. — For references to other obituaries cf. *OA* No. 4071.

(4379) REICHHOLF, J., 1982. Neunachweise der Schwarzen Heidelibelle (Sympetrum danae Sulz. 1776) am unteren Inn. *Mitt. zool. Ges. Braunau a. Inn* 4(4/6): 89-90. — (D-8399 Aigen/Inn, 69 1/5, FRG).
Several specimens of S. danae are recorded from Aigen/Inn and its vicinity, Bavaria, Fed. Rep. Germany (Aug., 1982). 5 other spp. are also listed.

(4380) SCHMIDT, E., 1982. Zur Odonatenfauna einiger Lacken des Seewinkels am Neusiedler See im Burgenland/Österreich. *Natur & Umwelt Burgenland.* 5(1/2): 14-20. (With Engl. s.). — (Biol. Didaktik, Univ. Bonn, Römerstr. 164, D-5300 Bonn-1, FRG).
Incidental observations on the odon. fauna of some brackish water "Lacken" in the Neusiedler Lake area, Austria are recorded (19 spp.), and tentative evidence is produced on the possibility of a second generation of Anax parthenope and Sympetrum fonscolombei in 1975.

(4381) THORP, J.H. & M.L. COTHRAN, 1982. Floating field microcosms for studying benthic communities. *Freshwat. Invertebr. Biol.* 1(1): 44-49. — (Savannah Riv. Ecol. Lab., P.O. Drawer E, Aiken, SC 29801, USA).
A floating platform containing individual microcosms was used in field experiments for examining the role of predatory dragonfly larvae in affecting the structure of benthic macroinvertebrate communities. When manipulating small macroinvertebrates, this technique has advantages over the traditional field cages, e.g., the emigration and immigration of macroinvertebrates can be regulated without resorting to total enclosure with excessively small mesh size (Authors).

(4382) TWEEDIE M., 1982. Delicate damselflies. *Living Countryside, Lond.* 7(77): 1534-1536. — (Author's address not stated).
A general narrative with emphasis on the British fauna. (Cf. also *OA* No. 3746).

(4383) VEVERS, G., 1982. *The colours of animals.* Arnold, London.55 pp. (Inst. Biol. Stud. Biol., No. 146) [ISBN 0-7131-2858-5]. — (Author's address not stated).
The Odon. are mentioned with reference to ommochromes (p. 19): "A dark brown ommatin gives the dark background for the striking structural blue of Zygoptera, and ommin is present in the eyes. In Sympetrum the scarlet of the males is due to reduced ommatin, the yellowish-brown of the females to oxidized ommatin".

(4384) VINOGRADOV, A.E., 1982. Parallelizm sposoba upakovki DNK v spermiyah nasekomyh iz raznyh otryadov. — Parallelism of DNA packing pattern in sperms of insects belonging to different orders. *Citologiya* 24(10): 1199-1204. (Russ., with Engl. s.). — (Inst. Cytol., USSR Acad. Sci., Leningrad, USSR).
48 spp., referable to 10 orders, incl. Odon. (12 spp., 8 gen., 6 fam.) were examined by means of polarized fluorescent microscopy. Within one and the same order, 1-3 types of DNA packing were recorded. While in unrelated orders, such as Orthoptera, Odonata (Aeshnidae) and Hymenoptera (Tenthredinidae), the mode of DNA packing is identic (DNA axis being almost parallel to the longitudinal sperm head axis), in some other orders, phylogenetically related to the former, distinct modes of DNA molecule orientation were observed in the sperms. This is also shown on a phylogenetic graph of the class.

(4385) WAAGE, J.K., 1982. Causes of escalated

territorial disputes in the damselfly, Calopteryx maculata. *Am. Zool.* 22(4): 972 [Abstract]. (Div. Biol. & Med. Sci., Brown Univ., Providence, RI 02912, USA).
[Verbatim]: 70-75% of territorial disputes between resident males and intruders or neighboring residents are settled in under 15 sec by chasing and display. However, other disputes involve escalated bouts of intense spiraling and chasing, that last up to 1 hr. Game theory models for animal contests predict that escalations should generally result from confusion over ownership or boundaries of a territory. This was tested using movable oviposition sites (center of territory) and temporary removal of resident males. The results of these experiments support the hypothesis that escalation does result from confusion over ownership or boundaries. Most of this confusion is due to (1) the way in which perch and oviposition sites are distributed, and (2) interlopers taking a territory while the resident is away mating or fighting.

(4386) WILDERMUTH, H., 1982. Sicherung, Pflege und Gestaltung besonders gefährdeter Biotope (Ökosysteme). *Jb. Naturschutz Landschaftspfl.* 33: 68-91. — (Mythenweg 20, CH-8620 Wetzikon).
Considerations on conservation and management of particularly threatened ecosystems, by the leading Swiss specialist in this field, and containing passing references to the Odon.

(4387) WILMOT, B.C. & L.P. WILMOT, 1982. A selected bibliography of literature on Odonata from Africa and adjacent islands. Part 2. *Annls Cape prov. Mus.* (nat. Hist.) 14(2): 81-87. — (Albany Mus., Somerset Str., Grahamstown-6140, cape, RSA).
Contains 163 titles. For pt I cf. *OA* No. 2136.

1983

(4388) (Anonymous, 1983. [Obituary]. [Dr Basil Elwood Montgomery]. *Weta* 6(2): 59.
Obituary notice, with reference to Prof. Montgomery's work in New Zealand.

(4389) (Anonymous), 1983. The Seventh International Symposium of Odonatology. *Unibo News, Mafikeng* 2(2): 8. — (c/o Prof. Dr M.J. Parr, 4 Totius Ave., Riviera Park, Mafikeng-8670, Bophuthatswana, Southern Africa).
A report on the Symposium, with emphasis on the work of Prof. Dr M.J. Parr, whose portrait is included. (Cf. *OA* No.4176).

(4390) ARTHUR, J.W., J.A. ZISCHKE, K.N. ALLEN & R.O. HERMANUTZ, 1983. Effects of diazinon on macroinvertebrates and insect emergence in outdoor experimental channels. *Aquat. Toxicol.* 4(4): 283-301. — (Monticello Ecol. Res. Stn U.S. Environ. Prot. Agency, P.O.B. 500, Monticello, MN 55362, USA).
Flatworms, physis snails, isopods and chironomids were most tolerant, leeches and Crangonyx (Amphipods) were less tolerant, while Hyalella (Amphipoda), mayflies, caddisflies and the Odon. (Enallagma, Ischnura) were most sensitive.

(4391) ASAHINA, S., 1983. [The] 1978-1983 progress report on dragonfly conservation in Japan and China. *Rep. Odon. Specialist Group Int. Un. Conserv. Nat.* 5: 1-4. — (Takadanobaba 4-4-24, Shinjuku-ku, Tokyo, 160, JA).
The background of the conservation policy in Japan is briefly outlined, the list of hitherto legally protected odon. spp. is given, and notes are presented on Libellula angelina, Leucorrhinia intermedia ijimai, and on Erythromma najas baicalensis. In addition, a statement is made on odon. conservation efforts in the P.R. China.

(4392) BADER, C., 1983. Oekologische Untersuchungen im Unterengadin. Wassermilben (Hydracarina). *Ergebn. wiss. Unters. schweiz. NatnParks* (NF) 12(9)D: 49-68. — (Naturhist. Mus., Augustinergasse 2, CH-4051 Basel).
The hydracarine fauna (60 spp.) of the Lower Engadine, Switzerland is listed and discussed. 6 Arrenurus spp., all recorded from the Lake of Tarasp (alt. 1404 m), are usually associated with the Odon., viz. A. (A.) bicuspidator, A. (A.) compactus, A. (A.) crassicaudatus, A. (Megaluracarus) tubulator, A. (M.) adnatus, and A.

(M.) albator. All of them are eurytherm and stagnicolous.

(4393) BAGGE, P., 1983. The macrobenthos of the River Tourujoki and its tributaries (central Finland). 2. Odonata, Heteroptera and Coleoptera. *Acta ent. fenn.* 42: 15-22. (With Swed. & Finn. s's.). — (Inst. Biol., Univ. Jyväskylä, Yliopistonkatu 9, SF-40100 Jyväskylä-10, Finland).
19 odon. spp. are listed, of which 13 are represented by larval records.

(4394) BAUMGARTNER, H., 1983. Moore, gefährdete Naturlandschaften. *Schweizer Naturschutz* So-Nr. 6/83, 32 pp. — Available, at sFr. 2.-, from Schweizerischer Bund für Naturschutz, Postfach 73, CH-4020 Basel (also in Fr. version). — (Author's address not stated).
The series is directed at the general reader (cf. *OA* No. 3336); the booklet presents a rounded-off account on the origin, evolution, morphology, ecosystems and on the economic and demographic utilisation of the [Swiss] moor. A reference is made (p. 20) to the 1978 discovery of Aeshna subarctica in Switzerland.

(4395) BELLE, J., 1983. On the species of the polygonus group of Progomphus with a description of a new species (Odonata, Gomphidae). *Tijdschr. Ent.* 126(7/8) 137-144. — (Onder de Beumkes 35, 6883 HC Velp, NL).
P. occidentalis sp. n. is described and figured (holotype ♂: San Antonio, Venezuela?). The other 3 spp. of the group are: P. polygonus Sel. (wings figured), P. polychromus Ris (distribution mapped), and P. abbreviatus Belle (♂ redescribed, first ♀ described).

(4396) BELLE, J., 1983. A review of the genus Zonophora Selys (Odonata, Gomphidae). *Tijdschr. Ent.* 126(7/8): 145-175. — (Onder de Beumkes 35, 6883 HC Velp, NL).
The genus is revised and keyed, and the Zonophorinae sfam. n. is erected. The following (infra)specific taxa are described as new: Z. campanulata annulata ssp. n. (holotype ♂, allotype ♀: Jatai, Goiás, Brazil), Z. diversa sp. n. (holotype ♂: Nova Teutonia, Santa Catarina, Brazil), and Z. nobilis sp. n. Holotype ♂: Taracua, Amazonas, Brazil).

(4397) BELYSHEV, B.F. & A.Yu. HARITONOV, 1983. *Geografia strekoz (Odonata) meridional'nogo faunisticheskogo carstva.* — [*Geography of dragonflies (Odonata) of the southern realm*]. Nauka, Novosibirsk. 153 pp. (Russ.) — (First author: Kirova 76-7, USSR: 630102 Novosibirsk. — In the western world the book is available from "Scientia", P.O. Box 137, 7200 AC Zutphen, NL: price: Hfl. 20.-).
This is the second and concluding part of the series on the geography and history of the odon. fauna of the world (cf. *OA* No. 3292). It deals with the "southern faunal realm", i.e. with the holotropic fauna and with the Southern Hemisphere.

(4398) BELYSHEV, B.F. & A. Yu. KHARITONOV, 1983. Zoogeograficheskaya struktura fauny strekoz Sredizemnomorskoy podoblasti Subgolarktiki. — Zoogeographic structure of the odonatan fauna of the Subholartic Mediterranean Region. *Vest. Zool., Kiev* 1983(5): 9-15. (Russ., with Engl. title). — (First Author: Ul. Kirova 76, kv. 7, USSR-630102 Novosibirsk).
A biogeographic analysis is presented of the odon. faunas of Afghanistan, Iran, Central Asia, Asia Minor, Caucasus, Middle East, mediterranean Europe and Africa.

(4399) BINKOWSKI, R., 1983. Beobachtungen von Odonaten am 8. Sept. 1979 und am 31.8.1980 [sic!] im Naturschutzgebiet des "Heiligen Meeres". *Wasser & Leben, Osnabrück* 1983 (6): 139-143. — (Lindenstr. 32, D-4504 GM Hütte, FRG).
Enumeration of the spp. collected during 2 field trips (Westfalia, Fed. Rep. Germany).

(4400) BLOIS, C., 1983. *Partage des ressources entre les larves de trois anisoptères. Cas particulier: étude expérimentale du choix alimentaire chez Anax imperator.* Th. Doct. Troisième Cycle, Univ. Rennes I, Rennes. XVIII+237 pp. — (Lab. Ethol., Univ. Rennes I, Campus de Beaulieu, av. Gén. Leclerc, F-35042 Rennes).
Resource partition in the larval Aeshna cyanea, Libellula depressa and Anax impera-

tor was examined, with special emphasis on the experimental work relative to the choice of food in the latter sp.

(4401) BRODSKY, A.K. & V.D. IVANOV, 1983. Funkcional'naya ocenka stroeniya kryl'ev nasekomyh. — Functional estimation of the structure of wings in insects. *Ent. Obozr.* 62(1): 48-64. (With Engl. s.). — (First Author: Dept Ent., Univ. Leningrad, Universitetskaya naberezhnaya 7/9, USSR-199164 Leningrad).
The functional assessment of insect wing structure is discussed. The considerations are mainly based on examples from Neuroptera, Trichoptera and Mecoptera, but various references are made to the Odon. as well.

(4402) BUCHWALD, R., 1983. Kalkquellmoore und Kalkquellsümpfe als Lebensraum gefährdeter Libellenarten im westlichen Bodenseeraum. *Telma* 13: 91-98. (With Engl. s.). — (Oberlinden 4, D-7800 Freiburg, FRG).
The odon. fauna of the calcareous springs and sloughs in the Konstanz area, Bodensee, Fed. Rep. Germany is analysed, with special reference to the habitat ecology of the locally threatened spp.

(4403) CARFI, S., P. DEL CENTINA & F. TERZANI, 1983. Odonati raccolti nel Jammu-Kashmir, Himachal Pradesh e Uttar Pradesh (India). *G. it. Ent.* 1(5): 261-264. (With Engl. s.). — (First Author: Ist. Zool., Univ. Firenze, Via Romana 17, I-50125 Firenze).
26 spp. are listed from 7 localities. Orthetrum martensi (Kulu Vally, H.P.) is the most interesting item.

(4404) CARLBERG, U., 1983. [Kirja-arvostelu - Bokrecension]. Hammond, C.O., The dragonflies of Great Britain and Ireland. *Notul. entomol.* 63(4): 157. (Swed.). — (Atlasvägen 53, S-131 34 Nacka, Sweden).
Book review of the volume listed in *OA* No. 4311.

(4405) CRUCITTI, P. & C. CONSIGLIO, 1983. Gli odonati del comprensorio Tolfetano-Cerite-Manziata (Italia entrale). *Problemi att. Sci. Cult.* (Miss. & Esplor.-XI) 380 (256): 37-71. (With Engl. s.). — (Ist. Zool., Univ. Roma, Viale dell'Università 32, I-00100 Roma)
The odon. fauna (32 spp.) of the Tolfetano Mts is enumerated, analysed, and its affinities to the neighbouring regions are discussed. For each sp. annotations are given on the localities, general distribution in Italy, and on its autecology in the area studied.

(4406) CUPPEN, H.P.J.J., 1983. *De libellen van de Oost-Veluwe.* — [*Dragonflies of the eastern Veluwe*]. Samenwerkingsorgaan Oost-Veluwe, Apeldoorn. 19 pp., 4 maps + 1 tab. excl. (Dutch). — (Samenwerkingsorgaan Oost-Veluwe, Hoofdstr. 165, P.O. Box 748, 7300 AS Apeldoorn, NL).
A detailed treatment of the odon. fauna (43 spp.) of the eastern Veluwe area, The Netherlands.

(4407) CUSHMAN, R.M., 1983. An inexpensive, floating, insect-emergence trap. *Bull. environ. Contam. Toxicol.* 31: 547-550. (Environ. Sci. Div., Oak Ridge Natn. Lab., Oak Ridge, TN 37830, USA).
A rectangular, bottomless (28 x 19 x 9 cm) floating trap is described and illustrated. It has been successfully applied to Odon.

(4408) DOMMANGET, J.-L., 1983. Les odonates du marais de la fontaine Saint-Pierre (Parc de Versailles). *Bull. Soc. versaill.* 10(4): 95-108. — (7 rue Lamartine, F-78390 Bois d'Arcy).
A detailed account on the composition and ecology of the odon. fauna (21 spp.) of this locality in the famous Versailles Park, France. Of particular interest are the (World War II) bomb crater habitats.

(4409) DUNKLE, S.W., 1983. New records of North American Odonata. *Ent. News* 94(4): 136-138. — (Bureau Ent., Div. Plant Industry, Box 1269, Gainesville, Fla 32602, USA).
28 state records, 11 range extensions, and 12 flight data extensions are given for 36 spp. Aeshna multicolor is delated from the Missouri fauna. Behavioural and habitat notes are presented for Arigomphus maxwelli and Aeshna mutata.

(4410) FORSYTH, D.J., 1983. Animals of the lake bed. *In:* D.J. Forsyth & C. Howard-Williams, [Eds], Lake Taupo: ecology of a New Zealand lake, pp. 97–110. DSIR Inf. Ser., No. 156, Wellington. — (Ecol. Div., DSIR, P.O. Box 415, Taupo, NZ).
Larval Xanthocnemis zealandica, Hemicordulia australiae and Procordulia grayi are reported from Motuoapa Bay.

(4411) *FRASERIA.* Newsletter of the S.I.O. National Office in India, Ukai, No. 5 (Dec. 1, 1983). — For order conditions cf. *OA* No. 3423. — (c/O Dr B.K. Tyagi, Malaria Res. Cent., I.C.M.R., Ukai-394680, Distr. Surat, Gujarat, India).
In addition to various administrative communications and announcements, there are the following articles: *Chandra, M.* (High Altitude Zool. Fld Stn, Zool. Surv. India, Solan, Himachal Pradesh): Additions to the odonate fauna of District Solan, Himachal Pradesh (17-18); — *Kumar, A. & B.K. Negi* (Northern Regional Stn, Zool. Surv. India, 13 Subhash Rd, Dehra Dun-248001, U.P.): The eggs of Ictinogomphus rapax (Rambur) (Odonata: Gomphidae) (18); — *Tyagi, B.K.* (address cf. above): A preliminary list of the little-known dragonflies of north-western India (18-19).

(4412) GALLETTI, P.A. & M. PAVESI, 1983. Su alcuni odonati di Grecia. *G. it. Ent.* 1: 247-260. (With Engl. s.). — (First Author: Via Monte Generoso 2, I-20155 Milano).
35 spp. from 31 localities in Macedonia, Greece are enumerated, and the morphological features of some of them are described, figured and discussed in detail.

(4413) GILBERT, P. & C.J. HAMILTON, 1983. *Entomology: a guide to information sources.* Mansell, London. VIII+237 pp. [ISBN 0 7201 1680 5]. — Price: £ 18.-. — (First Author: Ent. Libr., Dept Ent., Brit. Mus. (Nat. Hist.), Cromwell Rd, London SW7 5BD, UK).
According to the statement in the Preface, this is a "source book for entomology". The coverage of the hasty, ad hoc compilation would hardly merit the listing in *OA* if it were not for the authors' affiliation with such respectable institutions as the Brit. Mus. Ent. Library and the Library of the Commonwealth Inst. Ent., resp. For an odon. student, the book will be of almost no direct help. Although the addresses of the SIO Utrecht Office and of the Japanese Soc. Odonatol. are given, and Selysia is listed among the ent. newsletters, no reference is made either to Odonatologica, to any other odonatol. periodical, or to Odonatological Abstracts. On the other hand, among the 250 journals, which authors "feel to be the most useful" for ["the newcomer to the serial literature of entomology"], there are some that ceased publication (but this is not stated, e.g. Acrida), some are strictly local and often rather obscure, while the listing of some others is entirely incomprehensible (e.g. "Gradinarska i Lozarska Nauka" — a Bulgarian periodical on horticulture and viticultural science, containing hardly any ent. papers). The listing of regional fauna works is even more peculiar. The single title given for "Africa" is that of S.H. Skaife's picture book (cf. *OA* No. 2649); the magnificent series on the Fauna of (British) India (or anything else on India) is entirely omitted, and the same is true of the 1980 fauna of Nigeria (cf. *OA* No. 3018), and of numerous other similar works in the western and non-western world alike. In a general work, pretending to be balanced on a world scope, a special heading on the "Insect fauna of the British Isles" is awkward. The listing of 5 items under "Distribution maps" (incl. Lamhna's provisional dragonfly atlas of Ireland; cf. *OA* No. 2230) is unnecessary; distribution maps appear in almost every monographic treatment. The "Sources for photographs and/or transparencies" [and films] are apparently all in Britain, save for 2 United States addresses: not a single of several important German, Japanese, etc. institutions is listed. It is not the principle of the necessary selection, but rather the ad hoc choice of titles that could be criticised almost ad infinitum. In a bibliographic work the spelling errors in the non-Engl. authors' names are also inexcusable (e.g. Bocciarelli for Bucciarelli, etc.). — In short: the compilation of such a work should be the task of a team of qualified specialists in the orders concerned. Only these could be ex-

pected to be able to prepare an adequate selection of literature pertaining to their particular field.

(4414) HÄMÄLÄINEN, M., 1983. Aeshna viridis (Evers.) (Aeshnidae) Pojois-Karjalalle uusi sudenkorentolaji. — [Aeshna viridis [(Evers.) (Odonata), a new dragonfly for the province of Karelia Borealis, Finland]. *Notul. entomol.* 63(4): 211. (Finn.) — (Tullilaboratorio, Teknii-kantie-13, SF-02150 Espoo-15, Finland).
The new locality in Värtsilä, Finland (July 25, 1983) is the northernmost record so far known of this sp.

(4415) HANDKE, K. & P. KALMUND, 1983. Erste Ergebnisse einer Kartierung der Libellen/ Odonata im Raum Saarbrücken aus den Jahren 1981 und 1982. *Faun.-flor. Notizen Saarland* 15(1): 191-200. — (First Author: Herzogenriedstr. 38, D-6800 Mannheim, FRG).
Approx. 250 streams and ponds in the area Dillingen - Neunkirche - St.Avold - Bliesbruck, Saarland, Fed. Rep. Germany were examined, and their odon. fauna (37 spp.) was mapped (2.5 x 2.5 km grid). The only other paper on the odon. fauna of Saarland is that listed in *OA* No. 519.

(4416) HEINBOCKEL, T., 1983. Die Libellenfauna im Schwingetal. *Naturk. Jb. Naturschutz-jugend Niedersachs.* 1983 (1): 39-51. — (An der B 74 Nr. 44, D-2160 Stade-3, FRG).
The odon. fauna of the Schwinge Valley, Lower Saxony, Fed. Rep. Germany is discussed with references to its composition, ecology and conservation.

(4417) HERMANS, J.T., 1983. De libellen (Odonata) van de Doort. — The dragonfly-fauna of the Doort. *Natuurh. Maandbl.* 72(10/11): 225--233. (Dutch, with Eng. s.). — (Hertestr. 21, Linne, NL).
The odon. fauna (20 spp.) of the Doort Nature Reserve, Limburg Prov., The Netherlands, is discussed with special reference to its ecological classification.

(4418) HERZOG, H.-E., 1983. Temperatureinflüsse auf die Hämolymphe von Libellenlarven der Gattung Aeschna cyanea. *Verh. dt. zool. Ges.* 76: 229. (With Engl. title). — (Inst. Cytol. & Mikromorph., Univ. Bonn, Ulrich-Haberland--Str. 61 a, D-5300 Bonn-1, FRG).
The effects of temperature on the haemolymph of larval A. cyanea are reported.

(4419) JANEČEK, B., A. LÖSCHENKOHL & J. WARINGER, 1983. Zur Litoralfauna des Hafnersees (Kärnten). *Carinthia* (II) 175/93: 391-399. (With Engl. s.). — (Third Author: Satzberggasse 16/4, A-1140 Wien).
Epitheca bimaculata and Sympetrum depressiusculum are added to the list published in *OA* No. 4014.

(4420) *JOURNAL OF THE BRITISH DRAGONFLY SOCIETY*, Vol 1, No. 2 (Nov., 1983). Edited by R. Merritt (48 Somerby Ave., Walton, Chesterfield, Ferby. S42 7LY, UK). Available from the same address.
Chelmick, D.G.: Observations on the ecology and distribution of Oxygastra curtisii (Dale) (11-14); — *Khan, R.J.:* Observations on wood--mice (Apodemus sylvaticus) and hobby (Falco subbuteo) feeding on dragonflies (15); — *Marren, P.R. & R. Merritt:* A review of Coenagrion hastulatum (Charpentier) in Britain (16-19); — *Mayo, M.C.A. & A.R. Welstead:* Coenagrion mercuriale (Charpentier) on the flood plains of the River Itchen and River Test in Hampshire (20-21); — *Kemp, R.C. & G.S. Vick:* Notes and observations on Gomphus vulgatissimus (Linnaeus) on the River Severn and River Thames (22-25); — *Corbet, P.S., S.A.Corbet & K. Kjelström-Corbet:* Somatochlora arctica (Zetterstedt) in Perthshire Scotland (25); — *Welstead, A.R. & N.L. Welstead:* Illustration of the variation in pigmentation of the 8-10th abdominal segments of male Ischnura pumilio (Charpentier) in the New Forest, Hampshire (26); — *Colley, L.T.:* Coenagrion mercuriale (Charpentier) in Anglesey, North Wales (27); — *Smith, L.N.S.:* Enallagma cyathigerum (Charpentier): self--survival motivation? (27); — *Benton, E. & R.G. Payne:* On the rediscovery of Lestes dryas Kirby, in Britain (28-30).

(4421) KING, J.M., 1983. Abundance, biomass and diversity of benthic macro-invertebrates in a Western Cape river, South Africa. *Trans. R. Soc. sth. Afr.* 45(1): 11-34. — (Zool. Dept, Univ. Cape Town, Private Bag, Rondebosch-7700, RSA).
The fauna of the Eerste River, Cape, was studied, and a number of odon. spp. are listed from various localities.

(4422) KUKULIES, J., 1983. Structural adaptations of the cuticle to the osmoregulatory function of the larval dragonfly rectum. *Verh. dt. zool. Ges.* 76: 222. (With Germ. title). — (Inst. Cytol. & Mikromorph., Univ. Bonn, Ulirch-Haberland-Str. 61 a, D-5300 Bonn-1 FRG).
It is primarily the epicuticle that determines the transcuticular ion diffusion. The cuticular depressions, which partly lack epicuticular components, are structural adaptations, providing local routes for efficient transcuticular ion diffusion to the underlying ion-pumping chloride epithelia.

(4423) LAM, E. & H. VERHAAR, 1983. Ischnura elegans in Drenthe [...]. *Amoeba, 's-Gravenhage* 1983 (Dec.): 37, 39-40. (Dutch; no volume and issue numbering). — (First Author: v. Lenneplaan 6, Hilversum, NL).
Statistical treatment of abdominal and hind-wing lengths in 8 populations, Drenthe Prov., The Netherlands.

(4424) LEGRAND, J., 1983. Note sur les odonates actuellement connus des Monts Nimba (Afrique occidentale). *Revue fr. Ent.* (NS) 5(4): 152-162. (With Engl. s.). — (Lab. Ent., Mus. Natn. Hist. Nat., 45 rue de Buffon, F-75005 Paris).
Most of the previously published material from this locality is summarised, a lectotype of Umma infumosa Fr. is designated, and Macromia funicularioides sp. n. is described and illustrated (♂ holotype: Guinea: Mt Nimba, Ziéla; 17-XI-1961; deposited in MNHN, Paris). The latter is closely related to M. funicularia Martin.

(4425) LEHMANN, G., 1983. Die Veränderung des Naturschutzgebietes "Maistaller-Moore" bei Kufstein (Nordtirol) durch anthopogenen Einfluss während der letzten 50 Jahre, dargestellt an der Libellenfauna (Insecta: Odonata). *Ber. nat.-med. Ver. Innsbruck* 70: 111--119. (With Engl. s.). — (Stimmerfeldstr. 17, A--6330 Kufstein).
The changes in the odon. fauna of the Nature Reserve "Maistaller-Moore" nr Kufstein, Northern Tyrol, Austria, brought about by human influence during the past 50 yr, are evidenced and discussed. The fauna decreased from 27 to 10 spp., and some tentative measures of conservation are suggested.

(4426) MALCEVSCHI, S., 1983. Strutture biocenotiche elementari del macrobenthos del medio tratto del Po. *Atti Mus. civ. Stor. nat. Trieste* 35: 289-304. (With Engl. s.). — (Ist. Ecol. anim. & Etol., Univ. Pavia, Pavia, Italy).
A general analysis is given of the elementary macrobenthos structure of a 100 km tract of the central part of the Po Riv. course, Italy. "Ophiogomhus spp." is the only reference to Odon.

(4427) MALICKY, H., H. ANT, H. ASPÖCK, R. DE JONG, K. THALER & Z. VARGA, 1983. Argumente zur Existenz und Chorologie mitteleuropäischer (extramediterran-europäischer) Faunen-Elemente. *Entomol. germ.* 9(1/2): 101-119. (With Engl. s.). — (First Author: Biol. Station Lunz, A-3293 Lunz).
Contains a passing reference to the Odon. (p. 114).

(4428) MARSH, N., 1983. *Trout stream insects of New Zealand: how to imitate and use them.* Millwood Press, Wellington. 224 pp. — (Autor's address not stated).
Tyings are described for the "Red Dragon Fly" imitation (= Xanthocnemis zealandica) and a "damselfly larva". (Cf. also *OA* Nos 2962, 3130).

(4429) MARTENS, A., 1983. Besiedlung von neugeschaffenen Kleingewässern durch Libellen (Insecta: Odonata). *Braunschw. naturk. Schr.* 1(4): 591-601. (With Engl. s.). — (Dürerstr. 29, D-3300 Braunschweig, FRG).
The odon. fauna of three 1-3-year-old ponds in

SE Lower Saxony, Fed. Rep. Germany was examined and compared with that of 14 older ponds in the adjacent area. The new ponds harbour a significantly higher number of spp. (19-24) than the older ponds (6-16). It is stated that under reasonable conditions almost any pond sp. is able to colonize new habitats very rapidly.

(4430) MATTILA, J., 1983. Leucorrhinia pectoralis (täplälampikorento), Odonata, sisämaasta. — [Notes on the occurrence of Leucorrhinia pectoralis in Finland]. *Salpausselän luonnonystävät* 1983 (4): 18-19. — (c/o Editors: Lahdenkatu 4, SF-15100 Lahti-11, Finland).
The Finnish records of L. pectoralis are reviewed, with special reference to its occurrence in the interior.

(4431) MIELEWCZYK, S., 1983. Dziesięć lat (1971--1981) działalności Międzynarodowego Towarzystwa Odonatologicznego. — [The tenth anniversary (1971-1981) of the activities of the International Odonatological Society]. *Wiad. entomol.* 3(3/4): 173-176. (Pol.). — (Dept Agrobiol. & Forestry, Pol. Acad. Sci., Swierczewskiego 19, PO-60-809 Poznań).
A detailed outline of the SIO history and activities, by a Charter Member of the Society, including a bibliography of Polish papers on SIO, and of papers published by Polish workers in various SIO periodicals.

(4432) NAKAMUTA, K., Y. TSUBAKI, M. YASUDA & Y. HIBINO, 1983. Male reproductive behavior of the Tiny Dragonfly, Nannophya pygmaea Rambur. *Kontyu* 51(4): 605-613. — (Lab. Appl. Ent. & Nematol., Fac. Agric., Nagoya Univ., Chikusa, Nagoya, 464, JA).
The observations were conducted at a moor in Omori, Nagoya, Japan. Males defended territories on the water surface of a small rivulet and waited for incoming receptive females. These territorial males perched on "emergent" low grass stems and leaves that were surrounded by water and promptly pursued any conspecific male that entered their territories. Males grasped incoming females in mid--air, the pair then usually formed the "wheel position", alighted on a grass in the male's territory and completed copulation. Females oviposited striking the water surface with the tip of their abdomen in their mates' territories. Males usually guarded their mates by hovering above them. Some males in the study site wandered from place to place and did not hold territories. They sometimes attempted to perch in other males' territory and number of copulations did not differ between territorial and wandering males. (Authors).

(4433) O'CONNOR, J.P., M.A. O'CONNOR & D.C.F. COTTON, 1983. Lestes dryas Kirby (Insecta: Odonata) discovered in eastern Ireland. *Ir. Nat. J.* 21(1): 34-35. — (First Author: Natn. Mus. Ireland, Dublin-2, Ireland; — Third Author: Regional Techn. Coll., Sligo, Ireland).
The recent Irish records are reviewed, and the habitats described.

(4434) PFAU, H.K., 1983. Mechanik und sensorische Kontrolle der Flügel-Pronation und -Supination. *Biona Rep.* 1: 61-77. (With Engl. s.). — (Inst. Zool., Univ. Mainz, Saarstr. 21, D-6500 Mainz, FRG).
The mechanics of the wing pronation and supination in Odon. is briefly summarized, and compared with the situation in Orthoptera (Caelifera). As in locusts, 2 different sectors of the twisting range are to be distinguished, but in contrast to the locust wing the mechanics of the two sectors are completely different. By pronation and supination, which cover the whole twisting range, a chordotonal organ, lying within the "Radioanalplatte" (axillary plate), is stretched to a maximum and then relaxed; since stretching is not symmetrical in the two twisting directions, the receptor shows very interesting analogies to the twisting-receptors of the locust. The chordotonal organ (with about 50 sensilla in Anax) contains very phasic units, discharging in both twisting directions through the whole twisting range. This suggests that relaxation also stimulates sensilla. Other mechanoreceptors (presumably two rows of campaniform sensilla in the dorso--frontal region of the "Radioanalplatte") show phasi-tonic response to unidirectional wing twisting (beginning at 0°). They may record the

angle of attack within the stroke phases or during soaring flight.

(4435) PLACHTER, H., 1983. Die Lebensgemeinschaften aufgelassener Abbaustellen. Ökologie und Naturschutzaspekte von Trockenbaggerungen mit Feuchtbiotopen. *SchrReihe Landesamt Umweltschutz, München* 56: 1-109. — (Bayer. Landesamt Naturschutz, Rosenkavalierplatz 3, D-8000 München-81, FRG).
The Odon. are dealt with on pp. 29-31 (23 spp.).

(4436) RAUSCHENBACH, F., 1983. Keine Angst für kleine Tieren. *Agfa-Gevaert Highlight* 1983 (5): 3-5. — (Copies free from: Agfa-Gevaert AG, D-5090 Leverkusen-1, FRG).
The article is listed here because of an excellent col. photograph of Pyrrhosoma nymphula (♂, ♀; 22 x 29.5 cm), which may be freely reproduced, provided the primary source is stated in the reprint.

(4437) REE, H.I. & W.J. LEE, 1983. Laboratory studies on predation efficacy of some Odonata nymphs and Coleoptera larvae against mosquito larvae. *Korean J. Ent.* 13(2): 31-38. (With Korean s.). — (First Author: Dept. Biol., Soonchunhyang Univ., Onyang 330-62, Korea).
After hibernation, Orthetrum triangulare melania larvae reached the ecdysis in 27.5 days. During this period, the total mosquito consumption was 1414 4th instars of C. p. pallens (daily average 51.6, max. 170) per dragonfly. The same values for Sympetrum sp. were 21.7 days, 457.2 Culex larvae (daily average 38.4, max.89).

(4438) REHFELDT, G., 1983. Die Libellen (Odonata) des nördlichen Harzrandes. *Braunschw. naturk. Schr.* 1(4): 603-654. (With Engl. s.). — (Zool. Inst. TU, Pockelsstr. 10a, D-3300 Braunschweig, FRG).
This is an excellent monograph on the odon. fauna (53 spp.) of the northern Harz Mts, Fed. Rep. Germany and German Democr. Rep. (clusteranalytical methods are adopted, and species-area relationships are proposed. With reference to habitat pretensions, 10 groups of spp. are distinguished. Their ecology, sociology and conservancy are discussed in detail.

(4439) SALISBURY, D., 1983. Want to know about flying? Ask a dragonfly. *Times-Colonist, Victoria, B.C.*, issue of Oct. 31, p. C-11.
A general article on dragonfly flight, in a local newspaper.

(4440) SCHMIDT, E., 1983. Odonaten als Bioindikatoren für mitteleuropäische Feuchtgebiete. *Verh. dt. zool. Ges.* 76: 131-136. (With Engl. s.). — (Biol. Didaktik, Univ. Bonn., Römerstr. 164, D-5300 Bonn-1, FRG).
The intact odon. habitats are characterised by a peculiar odon. fauna, RSO (Representative Spectrum Odonata). The RSO are useful as indicators of habitat disturbance by pollution, fish-and water fowl culture, and by bank management.

(4441) SCHMIDT, E., 1983. Zur Libellenfauna einiger Moore bei Waldburg im westlichen Allgäu. *Mitt. ArbGem. Wangen* 1983 (3): 42-52. — (Biol. Didaktik, Univ. Bonn, Römerstr. 164, D-5300 Bonn-1, FRG).
Annotated list of 28 spp.; Ischnura pumilio and Sympetrum depressiusculum are new to the fauna of western Allgäu, Fed. Res. Germany.

(4442) SCHROETER, W., 1983. Zu: Bachstelze (Motacilla alba) attackiert Grosslibelle (Anisoptera). *Vogelwelt* 104(6): 225. — (Lengerckestr. 34, D-2000 Hamburg-70, FRG).
With reference to the note listed in *OA* No. 4017, Cordulegaster bidentatus, Aeshna viridis and Calopteryx virgo are recorded being attacked by a White Wagtail.

(4443) SHEPPARD, D.A. & M.D. EYRE, 1983. The insects of Castle Eden Den: minor orders. *Vasculum* 68(3): 17-27. — (First Author: Nat. Conserv. Council, Calthorpe House, Calthorpe St., Banbury, Oxon. 0X16 8EX, UK).
7 odon. spp. are listed from this locality, between Sunderland and Hartlepool, United Kingdom.

(4444) SHERMAN, K.J., 1983. *The evolution of reproductive strategies in a dragonfly, Pachydiplax longipennis.* PhD thesis, Cornell Univ. XIV+246 pp. — (Dept. Epidemiol., Sch. Public Health & Community Med., Univ.

Washington, Seattle, Wash. 98195, USA). — Microfilm or xerox copy available from the University Microfilms International, Dissertation Copies, P.O. Box 1764, Ann Arbor, Mich. 48106, USA.
[Verbatim abstract]: The reproductive behaviour was studied at 2 ponds in Aiken, South Carolina. — P. longipennis males defended small mating and oviposition territories from conspecific males. These territories contained floating or shallow submerged vegetation which females used as oviposition sites. The amount of floating vegetation in territories was experimentally altered in 1981; results of these manipulations showed that females preferred to deposit eggs in territories with abundant vegetation. Manipulations also showed that males were more likely to defend areas with greather amounts of vegetation. — Daily male mating success was limited by low female visitation rates and by male abundance at breeding sites. The duration of pond visits and the tenure time in a particular territory were inversely related to the number of males at a breeding site. Large males (> 40 mm in total body length) had higher daily mating success than other males. Since fighting ability was size related, large males were able to defend successfully territories with the highest female visitation rates. In most cases, a male guarded his mate while she oviposited in his territory. A male which hovered above his mate and repulsed intruders could both maintain his territory and decrease the amount of interference to his mate, allowing her to oviposit an average of three times longer than unguarded females. Because females were scarce and multiple matings were common (suggesting that sperm competition was likely), noncontact guarding appeared to be an effective method for territorial males to maximize the number of eggs they fertilized. Nearly half of all territorial males visited several different territories in a single day. Essentially all males visited multiple territories over the course of their lifetime while some males visited several ponds as well. Because males probably have limited ability to detect microhabitats which are favorable for egg and early instar survival, males which mate and fertilize eggs in several territories should minimize the probability that no offspring survive to reproduce.

(4445) *SIOJA*. [Information Bulletin of the SIO National Office in Japan], Osaka, 1983. No. 1 (June 6), No. 2 (Dec. 5). (Jap.). — (c/o K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545, JA).
Various internal SIO communications, In No. 2, there is an obituary notice for I. Hiura, a noted Kansai odonatologist of the Osaka Nat. Hist. Mus. (deceased: Oct. 18, 1983).

(4446) SLOMP, R. & P. HARTOG, 1983. Insekten op het Winterswijk zoka. — [Insects collected during the Winterswijk Summer Workshop] — *Stridula* 7(1): 57-60. (Dutch). — (First Author: Hoevestein 239-8A, Wageningen, NL).
A list of 13 odon. spp., from various localities in the Winterswijk area, The Netherlands.

(4447) SPURIS, Z., 1983. Spāres — senatne mūsdienās. — [Dragonflies — living fossils]. *Zinātne un Tehnika, Riga* 1983 (7) 276: 18-19. (Latvian). — (Bot. Gardens, Latvian Acad. Sci., USSR-229021 Salaspils, Latvia).
General text, with 3 col. phot., by the leading Latvian odonatologist, directed at the general reader, and containing references to SIO, Odonatologica and Tombo.

(4448) STANIONYTE, A., 1983. Somatochlora arctica Zet. — novyy dlya Litovskoy SSR vid strekoz (Odonata), obnaruzhennyy v 1981 g. — Somatochlora arctica Zet. — a species of Odonata, new to the Lithuanian SSR, found in 1981. *In:* V. Volenta et al., [Eds]. Insect species that are new for, and rare in the Lithuanian SSR: reports and discriptions of 1983, pp. 31-34. Inst. Zool. & Parasitol., Acad. Sci., Vilnius. (Russ., with Lithuan. & Engl. s's). — (Inst. Zool. & Parasitol., Lithuanian Acad. Sci., Akademijos 2, USSR-232021 Vilnius).
S. arctica is reported for the first time from Lithuania, USSR (Marcinkonys, Varėna Distr.), and the occurrence of Coenagrion armatum is confirmed.

(4449) TEMBHARE, D.B., 1983 Mechanism of vitellogenesis and steroidogenesis in the

dragonfly, Orthetrum chrysis (Selys) (Libellulidae: Odonata). *Abstr. All India Symp. Physiol. Insect Reprod., Nagpur,* pp. 15-16. — (Dept Zool., Univ. Nagpur, Nagpur-440010, India).
A concise informative "synopsis".

(4450) TIMMS, B.V., 1983. Benthic macroinvertebrates of seven lakes near Cass, Canterbury high country, New Zealand. *N.Z. Jl marine & freshwat. Res.* 17: 37-49. — (Dept Zool., Univ. Canterbury, Christchurch-1, NZ).
Larvae of Xanthocnemis zealandica and Procordulia grayi were found in low numbers in 5 lakes, and P. grayi in the remaining 2. The odon. are essentially littoral, occurring close to macrophyte beds only.

(4451) *TOMBO. ACTA ODONATOLOGICA.* Published by the Society of Odonatology, Tokyo, Vol 26, Nos 1/4 (Dec. 30, 1983). — For data on subscription and membership cf. *OA* No. 3563. — (Mostly Engl., Jap. papers with Engl. s's). — (c/o Editor: Dr S. Asahina, Takadanobaba 4-4-24, Shinjuku-ku, Tokyo, 160, JA; — contact the Editor for the addresses of the authors).
Eda, S.: A male of Sympetrum risi risi [frontispiece photograph] (1); — *Asahina, S.:* What is "Aeschna petalura Martin?" (2-11); — Dry season dragonflies in Chantaburi, Thailand (11); — *Eda, S. & R. Shirasawa:* An abnormal pterothoracic pattern of Davidius m. moiwanus (12); — *Ishikawa, H. & F. Nishimura:* Capture of Tholymis tillarga in Kanagawa Pref. (12); — *Lien, J.C. & K.Matsuki:* Description of the larva of Orolestes selysi McLachlan from Taiwan (Lestidae: Odonata) (13-15); — *Asahina, S.:* [The Seventh International Symposium of Odonatology] (Jap.: 15, 19); — *Carle, F.L.:* The first collection of larval Epiophlebia superstes (Selys) (Anisozygoptera: Epiophlebiidae) (16); — *Miller, P.L.:* Contact guarding during oviposition in Hemianax ephippiger (Burmeister) and Anax parthenope (Selys) (Aeshnidae: Odonata) (17-19); — *Tsuda, S.:* On the spine located on the first abdominal segment of Mnais pruinosa species (20-22); — Asahina, S.: [The 1983 Meeting of the IUCN Odonata Specialist Group] (Jap.: 22); — *Ishikawa, H.:* Hybrid progenies bred from a natural crossing of Sympetrum eroticum eroticum male and S. baccha matutinum female (23-25); *Yokoi, N. & T. Mitamura:* Two new additions to the dragonflies of Fukushima Prefecture (26); — *Inoue, K.:* Zyxomma obtusum and Tholymis tillarga observed at South Borodino Island, Okinawa Prefecture (27-29); — Ischnura elegans recorded at Lake Chimikeppu, Hokkaido (30); — *Kohama, T.:* New records of Odonata from Miyaku Island, Ryukyus (30); — *Sugimura, M.:* Seasonal body-size difference in some dragonflies in southern Shikoku District (31-34); — *Sugimura M., S. Ukai & H. Sugimura:* Miscellaneous notes on the distribution of some Japanese Odonata (34-37); — *Ukai, S. & M. Sugimura:* Further contributions to the knowledge of the distribution and behaviour of Chlorogomphus brunneus costalis in southern Shikoku (38-39); — *Sonehara, I.:* Further contributions to the behaviour of Epitheca species (40); — *Arai, Y.:* Oviposition guarding behaviour of Lyriothemis pachygastra (41-42); — *Watanabe, K.:* Records of noteworthy dragonfly species from Ishigaki, Iriomote and Okinawa Islands (43-44); — *Eda, S.:* Annual meeting of the Society of Odonatology, 1983 (45).

(4452) TYAGI, B.K., 1983. Cytogenetics, cytotaxonomy and cytophylogeny of dragonflies (Odonata). *Abstr. All India Symp. Physiol. Insect Reprod., Nagpur,* pp. 6-7). — (Malaria Res. Cent., Ukai-394680, India).
A concise informative "synopsis", touching upon most of the subjects of current interest in this field.

(4453) VALTONEN, P., 1983. [Kirjoja]. D.C. Geijskes & J. van Tol, 1983. De libellen van Nederland (Odonata). *Luonnon Tutkija* 87(4): 147. (Finn.). — (Dept Electr. Eng., Tampere Univ. Technol., P.O. Box 527, SF-33101 Tampere-10).
Book review of the volume listed in *OA* No.4101.

(4454) WIEBUSCH, H. & T. HEINBOCKEL, 1983. *Die Libellen der Stader Geest* -

Verbreitung, Gefährdung, Schutz. Ornithol.-Naturk. Arbeitsgem. Stade, Stade. IV+38 pp. — (First Author: Knüll 32, D-2165 Bargstedt, FRG).
An essay on the odon. fauna (33 spp.) of the Stader Geest, Lower Saxony, Fed. Rep. Germany, with special reference to conservation aspects.

(4455) WINSTANLEY, W.J., 1983. *Additional literature references to the Odonata of the New Zealand Region.* 13 pp. Dept Zool., Victoria Univ., Wellington. — (Dept Zool., Victoria Univ., Private Bag, Wellington, NZ).
Almost 170 bibliographic references are added to the list as cited in *OA* No. 3338.

(4456) WISKE, K.A.J., 1983. Lacewings and aquatic insects of New Zealand. 2. Fauna of the northern offshore islands. *Rec. Auckland Inst. Mus.* 20: 259-271. — (Auckland Inst. & Mus., Private Bag, Auckland, NZ).
4 odon. spp. are listed from 12 islands. Of particular interest is the record of Ischnura a. aurora from the Maria Isl., Noisies Archipelago, where there is no freshwater. — (*Abstracter's Note:* Pantala flavescens is not mentioned. It has been recorded from Little Barrier Is., in the paper listed in *OA* No. 3136).

(4457) YASUMATSU, Y., 1983. La richesse de la faune de la rizière thailandaise en entomophages; son importance pour le développement de la lutte intégrée en riziculture tropicale. *Agron. tropic.* 38(1): 52-55 (With Engl. & es. s's). — (Lab. Ent., Fac. Agric., Univ. Kyushu, Fukuoka, 812, JA).
As a result of 7 yrs of ecological studies on the natural enemies of rice pests, the arthropod fauna of ricefields in Thailand is discussed, and the natural enemies of each type of pest are treated in turn. Predators, such as Odon., are essential to the control of some adult pests and are maintained in their absence on chironomids, but too great an abundance of these alternative prey tends to reduce predation on rice pests. Cultural measures and biological control are recommended as alternatives to insecticides.

1984

(4458) (Anonymous), 1984. Museum hires specialist for research of insects. *The Lariat, Waco* 86(54): 8. — (c/o C.E. Williams, 704 Foster Str., Marlin, Texas 76661, USA).
A note in Baylor's Univ. newspaper on the appointment of the well-known Texan odonatologist C.E. Williams, in the position of Research Associate of the univ. "Strecker Museum". The reception, organized by the Museum on this occasion (Jan. 18, 1984), was marked by the formal opening of the exhibition, "The nature photographs of Curtis E. Williams". Articles on the exhibit, with curriculum notes on C.E. Williams have appeared in Marlin Daily Democrat (Vol. 83, No. 272, p. 3; Jan. 17, 1984), and in the Waco Tribune-Herald (Jan. 19, 1984; p. 6B), both with portraits and references to his odonatol. work. (For references on other press reports on C.E. Williams and his odonatol. work cf. *OA* No. 2551).

(4459) BELLE, J., 1984. Nothodiplax dendrophila, a new genus and a new species from Surinam (Odonata: Libellulidae). *Ent. Ber., Amst.* 44(1): 6-8. (Onder De Beumkes 35, 6883 HC Velp, NL).
Description on the basis of 3 ♂ and 2 ♀; ♂ holotype: Mooi Wanna, 1-IV-1964. One paratype ♂ is in Florida Coll. Arthrop., Gainesville. The new genus is related to Erythrodiplax.

(4460) BLAB, J., 1984. *Grundlagen des Biotopschutzes für Tiere.* Kilda, Greven. 205 pp. [ISBN 3-88949-114-4]. — (Author: Inst. Naturschutz & Tierökol., Konstantinstr. 10, D-5300 Bonn-2, FRG).
On p. 89, a tabular review is given of 41 odon. spp., showing their habitat preferences and specifying the vectors by which they are threatened in Germany.

(4461) BRITISH DRAGONFLY SOCIETY, 1984. *Constitution, By-Laws and list of members.* Br. Dragonfly Soc., Chesterfield. 16 pp. — (c/o R. Merritt, 48 Somersby Av., Walton, Chesterfield, Derby. S42 7LY, UK).

Giving the text of Constitution and of Art. I--VI of the By-Laws (Art. VII available upon request) and the addresses of almost 300 members.

(4462) CLAUSNITZER, H.-J., P. PRETSCHER & E. SCHMIDT, 1984. Rote Liste der Libellen (Odonata). *In:* J. Blab et al., Rote Liste der gefährdeten Tiere und Pflanzen in der Bundesrepublik Deutschland, pp. 116-118. Kilda, Greven. — (First Author: Südstr. 6, D--3105 Eschede, FRG).
A revised Red List for the Fed. Rep. Germany. Of 80 known spp., some 20 are ubiquists, while about 20 rheophilic spp. are considered particularly endangered.

(4463) DREYER, W. & M. SOUTIF, 1984. La grande parade des libellules. Magic circus sur l'eau qui dort. *Geo, Paris* 1984 (60): 44-55. — (First Author: Lehrst. Ökol., Zool. Inst., Univ. Kiel, Olshausenstr. 40-60, D-2300 Kiel-1, FRG).
French version of the paper listed in *OA* No. 1854.

(4464) HUIJS, L.G.J. & H.P.J. PETERS, 1984. Sympetrum pedemontanum (Allioni, 1766) in Nederland waargenomen (Odonata: Libellulidae). — Sympetrum pedemontanum (Allioni, 1766) observed in the Netherlands (Odonata: Libellulidae). *Ent. Ber., Amst.* 44(2): 21-24. (Dutch, with Engl. s.). — (First Author: Venloseweg 64, 5931 GV Tegelen, NL).
Detailed account on the records mentioned earlier in the papers listed in *OA* Nos 4101, 4120.

(4465) JURZITZA, G., 1984. [Libellen]. *In:* H. Reichholf-Riehm, Insekten, pp. 24-47, 270-271, 48 col. phot. incl. Mosaik Verlag, München. [ISBN 3-570-01187-g]. — (Bot. Inst., Univ. Karlsruhe, Kaiserstr. 12, D-7500 Karlsruhe, FRG).
The pocket-size booklet, prepared in the style of the Audubon Soc. "field guides", covers the major insect orders, save for the Lepidoptera. Odon. are represented by 39 spp. An excellent photograph of each sp. is accompanied by concise but detailed information on its morphological features, habitat, distribution, abundance, reproduction, etc.

(4466) *PROGRAMME, ABSTRACTS & SOUVENIR [of the] FIRST INDIAN SYMPOSIUM OF ODONATOLOGY,* 23-25 January 1984. School of Biological Sciences, Madurai Kamaraj University, Madurai. IV+30 pp. — (c/o Dr S. Mathavan, Sch. Biol. Sci., Madurai Kamaraj Univ., Palkalal Nagar, Madurai--625021, India).
Programme (pp. I-IV); — *Kiauta, B.:* Cytophylogeny of Chlorocyphidae in southern Asia (p. I; title only); — *Kumar, A.,* A review on the bio-ecology of Indian dragonflies (1); — *Sangal, S.K. & B. Tyagi:* Calicnemia miniata doonensis, a new subspecies from the Dehra Dun valley (Dehra Dun, India) (Zygoptera; Platycnemididae) (2); — *M. Prasad:* Taxonomic significance of male genitalia in Odonata (3); — *Tyagi, B.K.:* Cytotaxonomy of the genus Onychogomphus Selys (Anisoptera: Gomphidae) with special reference to the evolution of the sex determining mechanism and the reduced chromosome number in the family Gomphidae (4); — *Ram, R.:* Two new species of Ictinogomphus (Anisoptera: Gomphidae) from India (5); — *Mittal, O.P. & V. Gandhi:* Chromosome make-up in two species of damselflies (Odonata: Zygoptera) (6); — *Tembhare, D.B.:* Advances in odonate endocrinology (7); — *Andrew, R.J. & D.B. Tembhare:* Neuroendocrine activity during the last intermoult period of the dragonfly Orthetrum chrysis (Selys) (Anisoptera: Libellulidae) (8); — *Vidyasagar, P.S.P.V. & M.A. Quyyum:* Histological studies on the neurosecretory system of the dragonfly, Trithemis aurora (Burmeister) (9); — *Thomas, K.I. & R. Prasad:* Chromosomes and the chromosomal basis of sex determination in a few species of Indian dragonflies (Odonata) (10); — *Srivastava, B.K. & B. Suri Babu:* Reproductive behaviour of Ceriagrion coromandelianum (Ramb.) (Zygoptera: Coenagrionidae) (11); — *Sarkar, N.K. & D.P. Haldar:* Localization of some cytochemical substance in the cephaline gregarine, in an odonate [Sic!] (12); — *Pitchairaj, R., M. Santhamizhselvan & V. Prema:* Yolk utilization in the developing eggs

of Mesogomphus lineatus (13); — *Tyagi, B.K.:* Conservation of Odonata in India: present situation, problems and some suggestions (14); — *Saxena, S.C. & R.S. Yadav:* Safety evaluation of microbial insecticide SAN 4021 and the extract of flowers of Delonix regia on the nymphs of dragonfly and damselfly (15); — *Bassalingappa, S., M.R. Gandhi, S.B. Havalappanavar, K.S. Muralidhar, S.V. Modse & P. Tharabai:* Enumeration of damselfly, Lestes elata Hagen (Odonata: Lestidae) and its possible role in the control of insects (16); — *Saxena, P.N. & S.C. Saxena:* Acute toxicity of O,O-dimethyl-S-bis (carboethoxy) ethyl phosphorodithioate to dragonfly (Bradinopyga geminata) larvae, the non-target insect species (17); — *Shanmugaval, S. & S.C. Saxena:* Absorption and metabolism of pesticides in dragonfly nymphs (18); — *Muthukrishnan, J. & M. Senthamizhselvan:* Properties of phosphomonoesterases of Mesogomphus lineatus embryo (19); — *Balasubramanian, M.P. & S. Palanichamy:* Studies on mitgut esterases of the dragonfly Brachythemis contaminata (Fabricius) (20); — *Chockalingam, S. & M. Krishnan:* Toxicity of selected organic pesticides to the nymphs of Brachythemis contaminata (21); — *Khan, M.W. & D.B. Tembhare:* Histological, histochemical and experimental studies on the rectum of nymph of the dragonfly, Pantala flavescens (Fabr.) (Anisoptera: Libellulidae) (22); — *Varadaraj, G.:* Evolution of the cuticle of a dragonfly Anax immaculifrons (Anisoptera: Aeshnidae) (23); — *Ahmetl, Ak. Z. & R.G. Michael:* Seasonal fluctuations of odonate nymphs in fishponds at different altitudes (24); — *Roy, S.P. & U.P. Sharma:* Investigations on the population dynamics and species diversity of nymphal odonates in a tropical shallow wetland (25); — *Poyyamoli, G. & T.J. Pandian:* Diel emergence patterns of some Indian odonates (26); — *Mathavan, S.:* Reproductive behaviour of certain tropical dragonflies (27); — *Jayakumar, E. & S. Mathavan:* Effect of fenthion and dursban on the predatory behaviour of dragonfly nymphs (28); — *Jebakumar, S.R.D., S. Mathavan & M.S.M. Christopher:* Effects of fenthion on the survival and acetylcholonesterase activity of the dragonfly nymphs Brachythemis contaminata and Mesogomphus lineatus (29); — *Mathavan, S:* Embryonic development and yolk utilization in certain tropical dragonflies (30).

(4467) RETTIG, K., 1984. Neues aus der Insektenwelt Ostfrieslands. *Ber. Beitr. Vogel.- Insektenwelt Ostfriesland* 15: 23-24. — (Danziger Str. 11, D-2970 Emden, FRG).
20 spp. are listed, with locality data.

(4468) RETTIG, K., 1984. Insekten Ostfrieslands (Libellen, Heuschrecken, Falter, Käfer) im Zeitraum 1968-1983 mit Angabe der Flugzeiten pp. *Ber. Beitr. Vogel- Insektenwelt Ostfriesland* 15: 35-42. — (Danziger Str. 11, D--2970 Emden, FRG).
The dates are given of the earliest and the latest seasonal records for 31 odon. spp., East Friesland, Fed. Rep. Germany. The locality data are not stated. The latest record is that of Aeshna cyanea, Oct. 31, 1968.

(4469) SCHNEIDER, W., 1984. Beschreibung von Gomphus kinzelbachi n. sp. aus dem Iraq (Odonata: Anisoptera: Gomphidae). *Ent. Z., Essen* 94(1/2): 1-9. (With Engl. s.). — (Inst. Zool., Univ. Mainz, Saarstr. 21, D-6500 Mainz, FRG).
G. kinzelbachi sp. n. (♂ holotype: Khanaqin, Alwand riv., Iraq, 6-VI-1958, deposited in Brit. Mus. (Nat. Hist.)) is described, figured, and compared with G. davidi and G. schneideri.