

**THE APICALE SPECIES GROUP OF ACANTHAGRION,
WITH DESCRIPTION OF FOUR NEW SPECIES
AND A HOOK-MOVING APPARATUS
(ZYGOPTERA: COENAGRIONIDAE)**

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The 8 spp. of the group are studied and keyed. The lectotype of *A. apicale* is designated, redescribed and illustrated. From Brazil, *A. chicomendesi*, sp. n. (holotype ♂: Mato Grosso), *A. flaviae*, sp. n. (holotype ♂: Amazonas), *A. kaori* sp. n. (holotype ♂: Amazonas) and *A. triangulare* sp. n. (holotype ♂: Acre) are described. *A. apicale descendens* Fraser, 1946 is revalidated as species. A study of the penis lobes was performed, demonstrating that the median lobe is inflatable and mainly responsible for the lateral movement of the sclerotized hook, whose importance in copulation is discussed.

**ODONATA FROM THE KINGDOM OF TONGA,
WITH A DESCRIPTION OF *PSEUDAGRION
MICROCEPHALUM STAINBERGERORUM* SSP. NOV.
(ZYGOPTERA: COENAGRIONIDAE)**

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The odon. fauna from the Kingdom of Tonga have been reviewed using published literature combined with recent data by the author. Some important taxonomic considerations are discussed and a complete reference list is provided. A species checklist is presented with a total of sixteen taxa so far known for the island groups within the country. Seven new species for the Kingdom of Tonga are reported here including *P. m. stainbergerorum* ssp. nov. (holotype ♂: Tonga, Tongatapu Isl., 26-IV-2010). The new subspecies is compared with its closest relatives known from elsewhere in the Pacific, their relationships briefly discussed, and suggestions for future studies given.

**POPULATION STRUCTURE IN DRY AND RAINY SEASONS
IN *ERYTHRODIPLAX UMBRATA* (LINNAEUS)
(ODONATA: LIBELLULIDAE)**

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Mark-recapture studies in adult odon. have revealed that rainy periods have a negative impact on population size, recapture rate, survival probability and life expectancy. One reason for this is that rainy periods are usually associated with low temperatures which indirectly and directly affect individual condition. However, given that most studies have been carried out in temperate environments it remains to be seen whether such phenomenon occurs in other places, i.e. tropical environments. Here, this question is approached by marking-recapturing the tropical *E. umbrata*, in a field site in central Colombia. Two seasons of opposite rainfall patterns were compared: a rainy and a dry season. After checking for no marking effects, no difference was found in population size and recapture rate. However, animals from the dry season had a higher survival and life expectancy compared to animals from the rainy season. These apparently conflicting results, suggest differential effects of seasonality. A population compensation may be occurring in the rainy season (with more animals emerging at this time compared to the dry season) despite the negative effects on survival. Thus, the principle that rainy periods have a negative impact in tropical odon. ssp. seems supported.

DIE LIBELLEN DER GERMANENGÖTTIN FRIGGA

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*... mit allem Fleiß viel Jahr über zusammengetragen und jetzt
den Gelehrten zur beliebigen Vermehrung und Verbesserung überlassen ...*

Johann Leonhard FRISCH, 1740,
Odonatologe, der zum allerersten Mal
das Wort „Libelle“ verwendete

THE DRAGONFLIES OF THE GERMANIC GODDESS FRIGGA – In 1919, the German author Hermann Löns published ‘*Wasserjungfern. Von Sommerboten und Sonnenkündern*’ (Voigtländer-Verlag, Leipzig), a collection of thirteen dragonfly stories written in a particular emotional style. Here Löns stated that in paganian Germanic times dragonflies had been consecrated to the goddess Frigga and that, therefore, early missionaries had damned dragonflies as diabolic, imposing on them the names ‘*Satansbolzen*’ and ‘*Teufelsnadel*’. The ‘*Wasserjungfern*’ were reprinted many times up to today and these statements have become widespread popular belief in Germany. Their diction being close to Nazi-terminology, Löns’s statements as to Frigga and the damnation of dragonflies were amended from the first edition following WW II but appeared again in all later editions. Here it is shown, by analyzing mythological and earliest clerical as well as ethnographic and old entomological literature, that dragonflies never have been consecrated to a Germanic goddess and that no clerical damnation ever took place.

WATER MITE PARASITES (HYDRACHNIDIA) OF ODONATES FROM THE NATURE RESERVE “JEZIORO SZARE”, NORTHWESTERN POLAND

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The relationships between larvae of *Arrenurus* s. str. and their odon. hosts from Lake Szare are described. A total of 173 water mite larvae of *Arrenurus affinis/neumanilvietsi*, *A. bicuspidator*, *A. cuspidator*, *A. cuspidifer*, *A. tricuspikator*, *A. robustus* and *Piona longipalpis* was collected. Of these, 151 were found on adult odon., 9 on odon. larvae and 13 on exuviae. Parasitic mite larvae were found on odon. adults but only phoretic mite larvae were found on the larvae and exuviae. The occurrence of parasites was most frequently and most numerous recorded on the thoracic segments of their hosts.

SHORT COMMUNICATIONS

**DESCRIPTION OF THE LAST INSTAR LARVA
OF *BRACHYDIPLAX FARINOSA* KRÜGER
FROM BORNEO
(ANISOPTERA: LIBELLULIDAE)**

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A ♂ final instar larva from Sarawak is described and illustrated, and compared with that of *Brachydiplax chalybea flavovittata* Ris, using also notes and illustrations of congeners gleaned from literature.

***DREPANOSTICTA SIMUNI* SPEC. NOV. FROM BORNEO,
WITH NOTES ON RELATED SPECIES
(ZYGOPTERA: PLATYSTICTIDAE)**

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The new sp. is described from Gunung Mulu National Park in Sarawak, Malaysian Borneo and compared with its closest congeners, *Drepanosticta barbatula* Lieftinck and *D. drusilla* Lieftinck, which are also refigured. New distribution records for the latter 2 spp. are documented.