

**THE GENUS *IDIONEURA* (SELYS)
WITH DESCRIPTION OF *I. CELIOI* SPEC. NOV.
(ZYGOPTERA: PROTONEURIDAE)**

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The new sp. is described from 1 ♂ and 4 ♀. Holotype ♂ and allotype ♀: Brazil: São Paulo State, Fazenda Santana do Rio Abaixo (24°14'55"S - 46°00'27"W), alt. 569 m, 30-XI-2002, collected in tandem; deposited in author's collection. It is compared with the original description of *I. ancilla* Sel., 1860 (the type sp. of the gen.) and with specimens identified as that sp. Diagnostic illustrations and notes on *Idioneura* distribution and biology are provided.

**REPRODUCTIVE BEHAVIOR
OF *ENALLAGMA COECUM* (HAGEN) IN CUBA
(ZYGOPTERA: COENAGRIONIDAE)**

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The reproductive behavior is described from 2 populations on the outskirts of Santiago de Cuba, between June 2005 and May 2006. ♂♂ started arriving at the water body in the morning nearly 2 h before ♀♀. Sperm translocation was brief (less than 30 s), and the duration of copulation averaged about 18 min. During oviposition the ♀ was guarded in tandem by the ♂, except when she submerged under water, when non-contact guarding was observed. The mean duration of oviposition was about 10 min. Abiotic factors that interfered with the reproduction were wind, absence of sun, and rain; and the biotic interactions included conspecific ♂♂, spiders of the genus *Dolomedes*, *Gambusia punctata* fishes and the lizard *Anolis sagrei*.

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**LYRIOTHEMIS DEFONSEKAI SPEC. NOV. FROM SRI LANKA,
WITH A REVIEW OF THE KNOWN SPECIES OF THE GENUS
(ANISOPTERA: LIBELLULIDAE)**

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Both sexes of the new sp. and its early instar larva are described and illustrated. Holotype ♂: Ratnapura district, near Kudawe, alt. 500 m, 3-VII-2007; to be deposited at the Colombo National Museum. The habitat characteristics and species behaviour are briefly outlined. The new sp. is compared to all known congeners. It closely resembles *Lyriothemis acigastra* (Sel.) and *L. elegantissima* Sel.

**LARVAL DEVELOPMENT AND GROWTH RATIO IN
ISCHNURA CRUZI DE MARMELS, WITH DESCRIPTION
OF LAST LARVAL INSTAR
(ZYGOPTERA: COENAGRIONIDAE)**

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Under stable laboratory conditions larval stages were measured and morphologically compared in order to establish growth ratio and total number of instars through their postembryonic development. Head width, total length, metafemur length, forewing pad length, and length and width of prementum were measured to determine variation between instars, and growth ratio was calculated. By Dyar's Law, 12 larval instars were estimated. Fundamental morphological differences were found in order to distinguish the stages and at the same time to have a record of the morphological development through the stages. Finally, the last larval instar is described and illustrated.

ODONATA OF THE ARGENTINE YUNGAS CLOUD FOREST: DISTRIBUTION PATTERNS AND CONSERVATION STATUS

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Odon. of streams, small rivers and ponds were sampled in the Yungas cloud forest of NW Argentina, and presence / absence information of spp. from samples and from examination of collections was recorded in a spatial-relational data base. Alpha, beta, and gamma diversity and total species richness expected for the area were estimated. Similarity in composition of odon. communities from lotic and lentic environments were analyzed according to latitudinal and altitudinal gradients, using multivariate cluster analysis. Assemblages from NW Argentina were compared to those from equivalent sites in SE Peru. Odon. species diversity was found to follow both a latitudinal (decreasing from N to S) as an altitudinal gradient (decreasing from low to high elevations). Based on IUCN (2001) criteria, the conservation status of the odon. spp. endemic to the Yungas cloud forest was assessed at a global scale; 6 spp. were assessed as of Least Concern and 2 as Near Threatened.

SHORT COMMUNICATIONS

**ADULT SURVIVAL OF *SYMPECMA PAEDISCA* (BRAUER)
DURING HIBERNATION
(ZYGOPTERA: LESTIDAE)**

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The survival of hibernating adults was assessed in its winter habitat in the Netherlands to gain insight in the potential importance of this life-history phase for the population dynamics of this endangered sp. Compared to other odon., monthly survival rates (Dec. 2004 - March 2005) were high (mean \pm SE = 0.75 ± 0.08), but overall winter survival was low (0.42). Potential causes of mortality during hibernation are discussed. The results imply that effective protection of this sp. in the Netherlands may benefit from protection of both its breeding and wintering habitat.

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ANALYSIS OF ECDYSTERONE IN *BRADINOPYGA GEMINATA* (RAMBUR) LARVAE BY REVERSE PHASE – HIGH PERFORMANCE LIQUID CHROMATOGRAPHY, RP-HPLC (ANISOPTERA: LIBELLULIDAE)

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Ecdysterone or 20-hydroxyecdysone (20E) is a polyhydroxylated ecdysone that plays a major role in insect growth and metamorphosis. The 20E level was analyzed in 2 larval instars of the dragonfly using RP-HPLC. The presence of 20E was demonstrated for the first time in dragonflies, with the higher levels occurring in the older larval instar (larger larvae), while in the younger instar (smaller larvae) low or negligible levels were recorded. This has implications for extending the use of odon. larvae as biocontrol agents in aquatic ecosystems.

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***TRIGOMPHUS HAINANENSIS* SPEC. NOV.,
A NEW DRAGONFLY SPECIES FROM HAINAN, CHINA
(ANISOPTERA: GOMPHIDAE)**

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Both sexes of the new sp. are described and illustrated. Holotype ♂, paratype ♀: China, Wushishan, Hainan, 30-III-2008; deposited in the Collection of Aquatic Insects and Soil Animals, Department of Entomology, South China Agricultural University Guangzhou. *T. hainanensis* sp. n. is closely related to *T. citimus* (Needham), from which it can be distinguished by the labrum, colour of ♂ superior appendices and by a pointed black occipital horn in ♀.

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