

THERMOREGULATION AND MICROHABITAT CHOICE IN *ERYTHRODIPLAX LATIMACULATA* RIS MALES (ANISOPTERA: LIBELLULIDAE)

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It was assessed whether solar incidence affects the spatial distribution, microhabitat choice, territorial defense, time spent in behavioural categories, activity patterns, and abundance of *E. latimaculata*. The study was conducted in a semi-lotic area in the Cerrado in Aparecida de Goiânia, Goiás, Brazil, using the scan procedure with a fixed area, sampling 3 environments, viz. shade, partial shade, and an area with constant solar incidence. There was a higher abundance and activity concentration of this sp. in areas with higher solar incidence than in other areas ($H = 19.180$; $P < 0.001$). This can be explained by the ecophysiological requirements of *E. latimaculata*, in which individuals need to be exposed to solar radiation to warm their bodies, allowing the beginning of their activities. Diurnal variation did not affect the behavioural pattern, indicating that individuals are ectothermic and need direct solar incidence on their bodies ($H = 12.193$; $P = 0.160$). They spend most of the time perching with wings dropped (41.448 ± 21.781 ; mean \pm SD) and displaying a territorial behaviour, making defense flights around the perch. In lentic water bodies ♀♀ seem only to mate and oviposit (exophytic, directly into the water).

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REVIEW OF THE ODONATA OF BOSNIA AND HERZEGOVINA

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The current knowledge on the Odonata fauna of Bosnia and Herzegovina is summarized based on museum and private collections, literature and new unpublished data of the authors. In all, 63 spp. are known, including first reports of *Platycnemis pennipes nitidula*, *Anax parthenope*, *Gomphus flavipes*, *G. schneiderii*, *Cordulegaster heros* and *Selysiothemis nigra* for the country. *Caliaeschna microstigma* is rediscovered after more than 100 yr. The first reliable data on the occurrence of *Somatochlora metallica* is reported. More than 1,400 new records were collected and a national odonatol. database has been created. Annotations to the new spp. and to some other faunistically interesting species are given. Possible future additions to the fauna of Bosnia and Herzegovina are discussed.

**ODONATA BIODIVERSITY
IN SOME PROTECTED AREAS
OF UMBRIA, CENTRAL ITALY**

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Odonate assemblages of 4 wetlands included in the Biotopes Inventory of Italy (Natura 2000 project) have been investigated. A total of 36 species has been recorded and no species-area relationship was found. The richness observed is about 60-90% of the potential richness of the biotopes. The occurrence of *Trithemis annulata*, previously unknown from the Umbria region, and new findings for the biotopes are reported. The odon. flight period spanned from early April to the end of November. Diversity and evenness profiles have shown more diverse communities at sites with a greater habitat heterogeneity and multivariate dispersion analysis has revealed higher homogeneity for Zygoptera than for Anisoptera.

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**PREDATORY POTENTIAL OF *BRADINOPYGA GEMINATA*
AND *CERIAGRION COROMANDELIANUM* LARVAE
ON DENGUE VECTOR *AEDES AEGYPTI*
UNDER CONTROLLED CONDITIONS
(ANISOPTERA: LIBELLULIDAE; ZYGOPTERA:
COENAGRIONIDAE; DIPTERA: CULICIDAE)**

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The predatory potential of *B. geminata* and *C. coromandelianum* larvae on *Aedes aegypti* larvae was investigated under laboratory condition with a view to screening these predators for use in the control of *Ae. aegypti* breeding in dengue prone areas. The feeding rate of 8th instar *B. geminata* on *Ae. aegypti* showed maximum predation on 1st instar larvae (86%), followed by 2nd, 3rd and 4th instars (72%, 66% and 48%), respectively. In the first hour, the consumption rate was maximal for all instars and a low intake (about 5%) was observed in subsequent hours. In 12th instar *B. geminata* larvae maximum predation was observed for the 1st and 2nd instar larvae (98%) of *Ae. aegypti*, followed by 3rd and 4th instars (92% and 78%), respectively. The feeding rate of 12th instar *C. coromandelianum* larvae on *Ae. aegypti* larvae showed that the maximum predation was of the 1st instar larvae (82%), followed by 2nd, 3rd and 4th instars (51%, 35% and 24%) respectively. The first hour consumption rate was maximum for all instars and no significant intake was seen in the following hours. The predation of *Aedes* larvae by the 2 spp. of odonate larvae was compared for the 4 mosquito larval instars by using one way ANOVA. No significant difference was found between them for 1st instar larvae of *Ae. aegypti* but there was a significant difference ($P < 0.05$) in predation on the other 3 instars, with *B. geminata* consuming more mosquito larvae. A single anisopteran larva is sufficient for eliminating the huge mass of larval mosquitoes breeding in a cement tank or a cement cistern. Therefore, this biological control agent could be released to control *Aedes* larval production in areas of dengue epidemics.

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SHORT COMMUNICATIONS

**THE LARVA OF *HELIAESCHNA SIMPLICIA* KARSCH, 1891
(ANISOPTERA: AESHNIDAE)**

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The ♀ larva is figured and described for the first time, based on exuviae from a reared specimen and an F larva collected from runnels in peat swamp forest in Sarawak, Malaysia. The larva is compared with those of *Heliaeschna filostyla* Martin, 1906 and *H. uninvulata* Martin, 1909, the only other spp. of the genus so far described, as well as certain other aeshnid genera. Notes on habitat and behaviour are included.

***HYLAEARGIA SIMPLEX* SPEC. NOV.,
A THIRD SPECIES OF *HYLAEARGIA* LIEFTINCK
FROM NEW GUINEA
(ZYGOPTERA: PLATYCNEMIDIDAE)**

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