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Abstracts of Student-Faculty Publications

Barman, E. H., E. Darwin Holmes, and G. A. Nichols. 1999. Biology of a central Georgia population of *Agabus stagninus* Say (Coleoptera: Dytiscidae) with a description of its mature larva and notes on the larva of *Agabus semivittatus* LeConte. *Georgia J. Sci.* 57: 255-266.

ABSTRACT—Mature larvae of two species of the *semivittatus*-group, *Agabus stagninus* Say and *A. semivittatus* LeConte, were cultured into the adult stage. Descriptions of mature larvae were based on this material with morphology corresponding generally to that expected for the Agabini and Colymbetinae. Discrimination of the two species may be possible because mature larvae of *A. stagninus* have 7-9 sensilla on the profemoral posteroventral surface while those of *A. semivittatus* have 5 or 6 in this series. *Agabus stagninus* larvae were collected in late January through February 1994 in Baldwin Co., Georgia, and larvae of *A. semivittatus* were collected in mid-May through mid-June, 1970 in Tompkins Co., New York. *Agabus semivittatus* oviposited in habitats associated with lotic systems, but the reproductive habitat of the central Georgia population of *A. stagninus* was influenced only marginally by flowing water. This project was supported in part by a Faculty Research Grant awarded by the Office of Research Services, Georgia College & State University. Aquatic Coleoptera Laboratory Contribution No. 19.

Mashke, J. E., E. H. Barman, and J. W. Johnson Jr. 1999. Natural history of *Copelatus caelatipennis princeps* Young (Coleoptera: Dytiscidae) in central Georgia with preliminary comments on the chaetotaxy of thoracic appendages of its mature larva. *Georgia J. Sci.* 57: 23-24.

ABSTRACT—Larvae of *Copelatus* were collected (19 April-4 May 1998) from temporary (polyxeric) woodland and roadside

habitats in Jasper County and cultured into the adult state. The presence of mature larvae in April was indicative of oviposition that would have occurred in mid-March. Collection sites were characterized by shallow water (≤ 25 cm) over muddy, clay substrates that supported few or no macrophytes. Neither fish nor odonate larvae were collected concurrently with *Copelatus* larvae. *Copelatus* larvae declined in number and were no longer collected from these sites by the end of May. A corresponding increase in the abundance of larvae of *Hoperius planatus* Fall was observed and larvae of *Laccophilus* (sp. Indet.) were numerous before the sites dried up in late May and early June. Sensillar patterns observed on coxae and trochanters of mature larvae of *Copelatus* corresponded closely to those predicted from evaluations of primary (ancestral) sensilla for the family Dytiscidae. However, positional and numerical differences were observed on femora, tibiae, and tarsi with femora exhibiting the most pronounced differences. This project was supported in part by a Faculty Research Grant awarded by the Office of Research Services, Georgia College & State University. Aquatic Coleoptera Laboratory Contribution No. 22.

Mooney, Deborah A., E. H. Barman, and J. W. Johnson Jr. 1999. A preliminary assessment of the life cycle strategy of *Hoperius planatus* Fall (Coleoptera: Dytiscidae) in central Georgia. *Georgia J. Sci.* 57: 23.

ABSTRACT—The monotypic genus *Hoperius* is restricted to the southeastern United States and in Georgia has been reported only from Clarke County. Mature larvae were collected from late April to early May 1998, from temporary (polyxeric) habitats in Jasper County, Georgia. Evaluations of dytiscid life cycles have been confined largely to species or populations reproducing in cold temperate regions. Consequently, most dytiscids have been characterized as univoltine with adults overwintering to oviposit in the spring. The presence of mature larvae in the Jasper County habitats, suggesting that oviposition had taken place in the first two weeks of

March, is consistent with a univoltine life cycle. However, mature larvae of *Hoperius planatus* were also collected in Hancock County from similar habitats, but these were taken in late August (1996), indicating that oviposition for that population had occurred in late July. Thus, in the lower Piedmont of Georgia, *Hoperius planatus* employs either a bivoltine or multivoltine life cycle strategy. This project was supported in part by a Faculty Research Grant awarded by the Office of Research Services, Georgia College & State University. Aquatic Coleoptera Laboratory Contribution No. 23.