



## A new *Alboglossiphonia* species (Hirudinea: Glossiphoniidae) from Egypt: Description and life history data

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### Abstract

A new glossiphoniid leech was collected from Assiut, Egypt. Both external morphology and internal anatomy have been examined. *Alboglossiphonia levis* n. sp. is placed in the genus *Alboglossiphonia* under the *disjuncta*-group on the basis of having three pairs of eyes, diffuse salivary cells, seven pairs of crop caeca and the eggs are attached directly to the venter of the parent. The new species, as most of species of the genus *Alboglossiphonia*, revealed a combination of the following characters; its greenish color, seven pairs of branchiate crop caeca and the gonopores are separated by two annuli, but it is characterized by the absence of papillae on the body surface and presence of four pairs of testisacs. The life history of *A. levis* was studied in the laboratory. Hatching occurred within 10–15 days of laying egg and the hatchlings were attached to the parent's venter by their posterior suckers. After another four weeks, young could leave their parent, grew and matured. Four months old leeches are able to lay eggs. The leech reproduces once during its life history in the laboratory which takes about six months. *A. levis* displayed well developed parental care where the parent protects their young and also feeds them. Feeding and other ecological observations were described.

**Key words:** new species, Hirudinea, Glossiphoniidae, morphology, ultrastructure, anatomy, taxonomy, life cycle, hatching, feeding

### Introduction

Glossiphoniid leeches have a world-wide freshwater distribution. Some are predators on invertebrates whereas others are sanguivorous ectoparasites of invertebrates, fish, amphibians, reptiles, water birds or mammals (Elliott & Mann, 1979). The genus *Alboglossiphonia* is characterized by three pairs of eyes, diffuse salivary glands, six to seven pairs of crop caeca and gonopores are separated by zero to two annuli. These leeches feed by sucking body fluids and soft parts of the prey.

The cocoons or single eggs are attached directly to the venter of the parent (Sawyer, 1986). Glossiphoniidae are the only leeches that brood their eggs and carry their young, and like all leeches, Glossiphoniidae are hermaphrodites with reciprocal cross-fertilization (Davies & Singhal, 1988). Fertilization is internal and accomplished in the majority of Glossiphoniidae by attaching a spermatophore to the body of the partner. The spermatozoa penetrate the body wall and take their way to the ovisacs via the coelomic sinuses. Once fertilization occurs, the eggs are deposited in a cocoon secreted by the clitellum.

The present leech is placed in the genus *Alboglossiphonia* Lukin, 1976 since it has three pairs of eyes, diffuse salivary cells, seven pairs of crop caeca, its eggs are attached directly to the venter and it is liquidosomatophagous. For the delimitation of somites, the neuromeric standard of somite limits has been adopted (Oosthuizen, *et al.*, 1988). The annulus bearing the nerve ganglion internally is considered to be the middle annulus of the somite, since the body surface of the present species is smooth and without papillae. Beside the detailed description of the present new species, the life cycle and feeding were also studied.