Sexual dimorphism of the wings of the ovoviviparous cockroach species *Blaptica dubia* (Blattoidea: Blaberoidae) 

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Both sexes, males [MM] and females [FF], of the cockroach species *Blaptica dubia* (Serville 1839) are distinguished, among other characteristics, by pronounced wing dimorphism: the MM have long wings covering the abdomen entirely, whereas the FF have strongly reduced wings. These differences and their formation were investigated using adult wings and wing pads.

- Newly hatched larvae [L1], already have small wing pads and the main tracheae with the same secondary ramifications characteristic for the wings of the adults. Up to L4, the wing anlagen continually grow in MM and FF likewise. Starting in L5, the form of the wings allows to identify the sexes. In FF, the tip growth of the wing remains behind that in the MM. The main growth of the prospective wings of the M and of the tegmina of the F takes part in the last larval instar [L7]. In both cases, the growth is based on the elongation of the remigial parts as well as on the enlargement of the anal region. The alae of the F, by contrast become strongly reduced. In the adult F, they match the wing anlagen of L4 as to size and anatomy; its form and tracheal pattern predominantly show larval features. Thus, these reduced wings may be interpreted as larval features persisting in the adult, rather than as a result of growth inhibition with the typical adult wing stage.

**Keywords:** *Blabtica dubia* (Serville 1839) - growth inhibition - secondary ramifications - tegmen - tracheal pattern - wing dimorphism - wing pads

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