

Louse flies (Hippoboscidae) on a young rock pigeon

Subjects: Louse Fly, unidentified genus and species (Insecta: Diptera: Hippoboscidae);
Rock pigeon, *Columba livia* (Aves: Columbiformes: Columbidae).

Subjects identified by: Contributor.

Location, date and time: Singapore Island, Kent Ridge, National University of Singapore (NUS) campus, at the end of Science Drive 2; 16 March 2015; 1010 hrs.

Habitat: Urban, among concrete buildings.

Observer: Contributor.

Observation: A young rock pigeon had apparently fallen out of its nest and was walking about on the ground as it was unable to fly. When the contributor approached the bird, a louse fly was observed crawling through the pigeon's feathers. After the pigeon was caught, eight more louse flies were extracted from its feathers. Among them were two pairs where the males were clinging onto the females' backs. Two of the adult flies are shown in the attached photograph. The louse flies did not fly away from their host, the furthest they escaped was onto the contributor's hand. Their main form of evasion is to crawl through the bird's feathers. A short while after capture, the females from both pairs 'gave birth' to whitish pre-pupa that start to darken (see lowermost item of attached photograph).

Remarks: Louse flies are obligate parasites of birds that suck and feed on the blood of their avian hosts (Kern, 2003). They have a unique form of reproduction, known as adenotrophic viviparity. The female feeds the larva with secretions from her milk glands in the 'uterus'. After three larval instars, the mother 'gives birth' to the larva which immediately pupates (Trilar & Krčmar, 2005).

References:

- Kern, W. H., 2003. Pigeon louse fly or pigeon fly, *Pseudolynchia canariensis* (Macquart) (Insecta: Diptera: Hippoboscidae). *University of Florida IFAS Ext. EENY*. 307: 1-3.
- Trilar, T. & S. Krčmar, 2005. Contribution to the knowledge of louse flies of Croatia (Diptera: Hippoboscidae). *Natura Croatica*. 14 (2): 131-140.

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Adult louse flies – male above, female centre, and darkened pupa below. Scale bars = 1 mm. Photographs by Foo Maosheng