



## New Zealand species of the shore-fly genus *Nostima* Coquillett (Diptera: Ephydriidae)

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### Abstract

The shore-fly genus *Nostima* Coquillett is first reported from New Zealand in a revision of the three species now known to occur there. Species included are: *Nostima kiwistriata* sp. n., *N. negramaculata* sp. n. and *N. duoseta* Cresson. The latter species was first described from Australian specimens and is here reported to occur widely in New Zealand. Detailed locality data from New Zealand are provided for each species. The phylogenetic relationships between the New Zealand species and species from other geographical regions are presented. A key to the species of *Nostima* occurring in New Zealand is presented.

**Key words:** Ephydriidae, *Nostima*, new species, key, New Zealand

### Introduction

Shore flies of the genus *Nostima* Coquillett have semiaquatic larval stages that feed on blue-green algae (Foote 1995), and adults usually occur in grassy habitats (Bährmann 1978, Steinly 1984). Species of *Nostima* are very small, obscure, and seldom collected. The natural history, ecology, and immature stages of only one species have been described (Foote 1983). The purpose of this paper is to describe the New Zealand species, the first recorded from these islands, including a discussion of their phylogenetic relationships to other species.

*Nostima* is derived from the Greek *nostimos*, meaning desirable. The generic name confirms Dahl's (1959) reference to *Nostima* as "our most beautiful ephydrid." Indeed, most species of *Nostima* have distinctive wing patterns, and many areas of the body are often richly invested with complex patterns of whitish silver, golden, and velvety patches of dense microtomentum.

Essentially occurring in most biotic zones, the genus *Nostima* is especially species rich in New World tropical and subtropical regions, and no specimens are known from the polar regions. The genus is presently known by 38 New World species with more species described from the New World than in all other biotic zones (Edmiston & Mathis 2005). Six species occur in the Afrotropical Region, three species occur in the Palearctic Region, two species occur in the Oriental Region and three species occur in the Australian Region. (Malloch 1933, Cresson 1943, Miyagi 1977, Cogan 1980, 1984, Canczoneri 1986, Canczoneri & Raffone 1987, Mathis 1989, and Canczoneri & Raffone 1995)

Discussion of the generic and higher level classifications was included in the revision of the New World species. In summary we consider *Nostima* to belong to the subfamily Ilytheinae Cresson, tribe Hyadinini Philpits *et al.* where it is closely allied with the genera *Philygria* Stenhammar and *Garifuna* Mathis (Edmiston and Mathis 2005).