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## New species of *Antocha* Osten Sacken, 1860 crane flies (Diptera: Limoniidae) for South Korea

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### Abstract

New species *Antocha* (*Antocha*) *koreana* from South Korea is described and illustrations of the distinguishing morphological features, including wing venation, male and female genitalia and male antenna, are provided with a discussion on distinguishing newly described species from other similar species. Habitat information for new species is presented. *Antocha* (*Antocha*) *subconfluenta* Alexander, 1930 is new record for Korean fauna and first record from outside Japan.

**Key words:** *Antocha koreana* sp. n., *Antocha subconfluenta* Alexander, Southeast Asia, new taxa

### Introduction

In 2012 research of Korean crane flies was started by the authors of this publication. The aim of the study is to register, redescribe, illustrate and prepare keys for all Korean species. The idea is, that redescrptions, illustrations and keys should be based on Korean specimens, because variation of morphological features was noticed in specimens belonging to same species, but collected in different localities across Palearctic.

Forested mountains cover more than two-thirds of South Korea's territory. Even though they are not very high, most of them are granitic with many beautiful small and fast running streams. Those streams are habitat places for *Antocha* larvae and thus the number of *Antocha* (*Antocha*) species living in these streams is relatively high. Podenas and Byun (2013) listed a total of 5 species. For comparison, waste territory of Mongolia was much better sampled than Korea, but only one species of *Antocha* (*Antocha*) was found there (Podenas, Gelhaus 2007). Specimens corresponding to undescribed species of *Antocha* were collected during a field trip to Jirissan National Park and its vicinities by the authors in May 2013.

Totally 155 species belong to genus *Antocha* (Oosterbroek 2014). They are grouped into three subgenera. Genus is known from all biogeographic regions, but is completely missing in South America. It is most diverse in Oriental Region, where it is represented by 74 species, with highest diversity and endemism in India, from where nearly third of all *Antocha* species are described (50 species). Oriental Region is followed by Palearctic, which has 43 species. Additional seven species are shared between Palearctic and Oriental. Nearctic is characterised by seven species, one of which is known also from Neotropics. 21 species are known from Afrotropics, two species from Australia and one species from Oceania (Papua New Guinea).

One fossil species of *Antocha* is described from Oligocene deposits of North America (Evenhuis 1994) and one species, which preliminary was placed in this genus, from Early Cretaceous Burmese amber (Podenas, Poinar 2009).

*Antocha* species constitute a very small portion of the entire crane fly population in Korea. Neighboring Japan, with its much larger territory and more diverse habitats has twice as much species of *Antocha* (*Antocha*) (Torii 1992, Oosterbroek 2014) *Antocha* are found in high numbers at the edges of fast running streams. Larvae develop in fast running streams. They are fully submerged and could be found in gravel or attached to the boulders. Usually, they emerge late in the evening and large numbers are attracted to the light. During the day, most of them are hiding

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