

Cool-Climate Insects and Survivors of the Ice Age

The climate of the Kushiro Wetlands, which has changed little over the past 6,000 years, supports many species of cool-climate insects. There are over 1,000 species of insects living in the wetlands; some are remnants of the last ice age, while others have migrated to the area more recently.

The impact of climate change

Many of the insects in the Kushiro region once inhabited a much wider area of Hokkaido. As temperatures have increased across much of the island, these insects have migrated to the cool wetlands of Kushiro, where annual temperatures average 5.8°C. These migration patterns show how the earth's climate and biodiversity is changing.

Ice-age survivors

Several insect subspecies in the Kushiro Wetlands have been in the area since the last ice age, including the subarctic darner dragonfly (*Aeshna subarctica*) and the Japanese water spider (*Argyroneta aquatica japonica*). These are almost identical to subspecies found in Europe and Eurasia.

Protected species

The wetlands are home to endangered insects protected as Natural Living Monuments of Japan, including the *ezokaojiro tonbo* dragonfly (*Leucorrhinia intermedia ijimai*) with its distinctive white face, the *akameito tonbo* damselfly (*Erythromma humerale*), and the *min-min zemi* cicada (*Hyalessa maculaticollis*). Although most of the area is too cold for it to live in, the *min-min zemi* thrives on the Wakoto Peninsula on Lake Kussharo, its northernmost habitat in Japan, thanks to the peninsula's geothermal heat.