

# Databasing the stoneflies (Plecoptera) at the Natural History Museum in Oslo reveals new Norwegian province records

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In 2010 the metadata of the Plecoptera collection created by the late Albert Lillehammer at the Natural History Museum in Oslo (NHMO) were digitised and georeferenced. 4319 species records, mostly of common species collected in the 1960s and early 1970s, were delivered to the online databases of Artsdatabanken, the Norwegian Biodiversity Information Centre. The NHMO collection, and other collection-based records in Artsdatabanken are used to evaluate and update the stonefly checklists of the Norwegian provinces. The changes relative to previous checklists are documented and discussed. The riverine species *Xanthoperla apicalis* (Newman, 1836) and *Isogenus nubecula* Newman, 1833 are rare and vulnerable species whose occurrence in Norway merits monitoring.

Key words: Plecoptera, NHMO collection, Albert Lillehammer, checklist, Norwegian provinces.

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## Introduction

The Natural History Museum of Oslo (NHMO) houses a large collection of Norwegian stoneflies, most of which were collected by the late Albert Lillehammer (1930–1992). When this collection was digitised and databased in 2010, it turned out that some historical records have been overlooked in the provincial checklists of Norwegian stonefly species that have been published so far (Lillehammer 1988: 152–153; Solem 1996). In this paper, the checklists of the Norwegian provinces (fylker) are updated on the basis of the samples held at the NHMO and the additions of Olsen (2008). For each species, any changes relative to the previous checklists are documented. I also discuss new provincial records as published online in Artskart, the web service of the Norwegian Biodiversity Information Centre Artsdatabanken (ADB) (artskart.artsdatabanken.no).

## Stoneflies collected by Albert Lillehammer

From the 1960s to his death in 1992, Albert Lillehammer worked at the Zoological Museum of the University of Oslo, which later became part of the NHMO. He worked extensively on river ecology and on the biology and taxonomy of Norwegian stoneflies (Brittain 1993). Among his often cited publications are his article series on Norwegian stoneflies in *Norsk Entomologisk Tidsskrift* (Lillehammer 1974a, 1974b, 1975a, 1975b, 1976) and his handbook *Stoneflies of Fennoscandia and Denmark* (Lillehammer 1988).

Lillehammer built up a large collection of Norwegian stonefly samples at the NHMO. He collected most material, some 94% of the databased samples, himself in the period 1964–1971. However, this collection also contains samples collected by others between 1925 and 1981. Lillehammer's publications sometimes refer to specimens that have not been located at