The Diptera collected by the Canadian Expedition, 1913-1918.

(Excluding the Tipulidæ and Culicidæ.)

By J. R. Malloch.

Introduction.

This paper deals with the Diptera collected by the Canadian Arctic Expedition 1913-16, and belonging to the following families: Sciaridæ, Chironomidæ, Simuliidæ, Leptidæ, Empididæ, Dolichopodidæ, Phoridæ, Borboridæ, Syrphidæ, Oestridæ, Tachinidæ, Calliphoridæ, Anthomyiidæ, Scatophagidæ, Helomyzidæ, Piophilidæ, Ephydridæ, and Chloropidæ. The number of species in the paper is ninety-three, representing fifty-five genera.[1]

Some of the genera and species included in this list are new to science, but others are recorded for the first time from Arctic America, having been previously known from the Arctic regions of the Old World. It is probable that many of the forms are circumpolar in their distribution, but the difficulties attendant upon their collection in the latitudes where they occur make it almost impossible to obtain representative collections from many regions.

Collections of Diptera from the far north present characteristics that are unmistakable to the eye of one who has previously studied material in other Arctic collections, since in both the remarkably uniform dull colours and in the genera comprising such collections they differ very strikingly from those of temperate regions. The predominating body-colour is a deep black, relieved occasionally with blue-black species such as the flesh-flies, and as a general rule the flies are hairy or bristly. Most of the forms are scavengers, living on decaying animal or vegetable matter, but a few are parasitic or predaceous. The phytophagous forms are rare, and from the far north no Trypetidæ are recorded, the most northern locality for that family being the Pribilof islands.

The work upon this collection was undertaken with the consent of Dr. Stephen A. Forbes, Chief of the Division of Natural History Survey of Illinois.

SCIARIDÆ.

The larvæ of this family live in decaying vegetable matter, sometimes in fungi, and occasionally in vegetation that has been attacked by other larvæ.

There are three species in this collection, none of which it is possible to identify specifically on account of their being represented only by females, and also owing to their defective condition.

Sciara, sp. 1.

This species has a peculiar wing venation which will enable some future student to associate the specimen with others that may be subsequently obtained.

The first vein ends in the costa midway between the cross-vein and the furcation of media, the latter originates about twice the distance of cross-vein proximad of the latter, rms very close to the upper branch of cubitus to the fork, the anterior branch then runs abruptly forward (towards costa) at almost a right angle to lower branch, curves round when about one-third of the distance to radius and runs to apex of wing, the cell it encloses being narrowed apically.

[1] *Types.* The types of the new species described in this report are deposited in the National Collection of Insects, Ottawa.