

## The Plant Galls collected by the Canadian Arctic Expedition, 1913-18

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The following report is based upon the material which was collected by Mr. F. Johansen. It is obviously fragmentary though nevertheless interesting because the records are from a little explored region. The galls on *Salix borealyi* appear to be new and the deformity produced by the Nematid is especially interesting. A provisional identification was obtained through the courtesy of Dr. L. O. Howard from Mr. S. A. Rohwer of the United States National Museum. The Eriophyid galls were submitted to Mr. H. E. Hodgkiss of the Agricultural Experiment Station, Geneva, N.Y., and the few comments he saw fit to make are appended to the characterizations of the deformities. It hardly appears wise to bestow names upon these galls and thus add invalid or nearly invalid names to a literature already overburdened with such appellations.

### *Salix* (willow).

Nematid gall on *Salix borealyi*, labelled Teller, Alaska, July 26, 1913, Frits Johansen.

The gall is an irregular, oval, white, woolly mass projecting equally on each surface of the leaf, divided by the midrib and with a major diameter of about 1 cm. The woolly fibers are 2 to 3 mm. long and within the compound mass are two somewhat elongate ovate hollows, one on each side of the midrib.

One gall examined contained a Nematid (possibly a species of *Pteronidea*) and a parasite, a species of *Eurytoma*. The identification of the larva was made by Mr. S. A. Rohwer of the United States National Museum. The gall was 1 mm. and that of the parasite by Dr. L. O. Howard, Chief of the Bureau of Entomology.

*Cecidomyia* species on *Salix borealyi*, labelled Teller, Alaska, July 26, 1913, Frits Johansen.

The gall is a somewhat irregular, rounded elevation, with a diameter of about 4 mm., projecting almost equally from both surfaces of the leaf. It is pale greenish-yellow, the surface with irregular rounded elevations and located near the midrib. The interior is hollow, whitish, and the walls have a thickness of approximately 0.5 mm. This is possibly the work of an *Oligotrophus*.

Willow beak gall (*Phytophaga rigida* O.S.) Specimens labelled *Salix* species, Jasper Park, Alta., middle September, 1916.

The galls are typical for this species except that they are smaller and greatly wrinkled, a condition very suggestive of parasitism. The galls have a length of about 1.5 cm., a diameter of 0.5 cm., and the surface is mostly dark brown or blackened; the distal third of the gall is lighter, rather strongly recurved and with the characteristic partly opened soft tip or beak.

This insect ranges across the continent, if one may safely draw conclusions from specimens of the galls. It is one of the more common willow inhabiting forms, occasionally so abundant as to attack the tips of a considerable proportion of the shoots in individual clumps. There is but one generation annually, the insect wintering in the gall, and the midges appearing in early spring. An extended bibliography is given in New York State Museum Bulletin 186, pages 213-214.