

DESCRIPTIONS OF TWO NEW POLYCHÆTA FROM ALASKA.

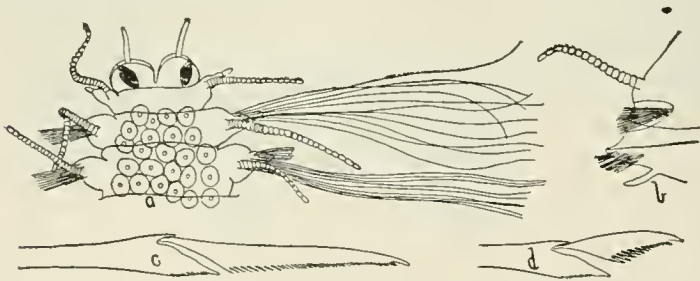
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Among a number of Alaskan Polychæta in the collections of this Academy, the two of which the descriptions follow are new.

Syllis quaternaria sp. nov.

This sexual free-swimming form of the type for which Malmgren instituted his genus *Chatosyllis* is probably the epitokous form of a true *Syllis*, but it cannot be correlated with any atokous form hitherto described.

The length varies from 7 to 9 mm.; the width between the ends of the parapodia is .8 mm. and between the tips of the capillary setæ 4.5 mm., or one-half the length of the body.



Syllis quaternaria.—*a*, dorsal view of prostomium, peristomium and first two somites bearing capillary setæ. $\times 24$; *b*, parapodium from IX with setæ cut off. $\times 32$; *c*, a long and *d*, a short notopodial seta from X, $\times 600$.

The prostomium (*a*) consists of a pair of prominent hemispherical lobes separated by a deep, narrow, median cleft, and each again divided by a shallow transverse groove. A pair of simple unjointed or obscurely wrinkled cylindrical tentacles arise from the latter grooves and incline decidedly toward the dorsum. They reach a length of $1\frac{1}{4}$ to $1\frac{1}{3}$ times the prostomium. No other cephalic appendages exist, but there are two pairs of dense, black or deep brown, short spindle-shaped eyes, each provided with a small cuticular lens. The dorsal eyes are the more posterior and look vertically upwards; the large ventral pair look downwards, forwards and outwards. Sometimes 1 or 2 small, rod-like

bodies of pigment occur with the eyes. The mouth is a minute opening situated at the very bottom of the vertical prostomial cleft near the ventral surface.

The peristomium (*a*) is but little modified and a segment just like the others, except that the parapodia lack the capillary setæ. The sides of the body are nearly parallel almost to the caudal end, where the last 12 to 15 of the total number of 40 to 43 segments taper to the pygidium. Each segment is about $\frac{1}{2}$ as long as wide, or anteriorly rather more than this. The small triangular pygidium bears a pair of large, stout moniliform cirri of about 25 joints, and in the males an additional short, slender, and unjointed median ventral cirrus.

Excepting the first pair the parapodia (*b*) are biramous, and all but the first and the last few bear capillary setæ in the notopodium. The basal part is a rather large dome-shaped structure, from which the neuropodium projects rather prominently and ends in a short, slightly curved dorsal acicular process, while a postsetal lamina, stepped at the ends for the rows of setæ, forms its more ventral portion. Two or three straight aciculi support the neuropodium. From the middle of the ventral surface of the foot arises a short, slender, tapered and unjointed ventral cirrus. The notopodium is a very slight, conical tubercle which receives the end of a single aciculum strongly curved at the tip and caps a large yellowish setigerous sac, from which the capillary setæ spring. Well above and separated from this tubercle arises the dorsal cirrus, which is always prominent and strongly moniliform. With considerable regularity the dorsal cirri are alternately longer and shorter, the even numbers being about equal to $\frac{2}{3}$ of the width of the body exclusive of the parapodia and consisting of 20 to 25 joints, whereas the odd numbers are about $\frac{2}{3}$ as long as they and have only 14 to 16 joints.

As stated above, all but the peristomium and the last 5 or 6 segments bear capillary notopodial setæ which form dense and very conspicuous bundles. They are perfectly smooth and simple in structure, glass-like in appearance, tapered to excessively fine but apparently flattened ends, and are more or less curved and sometimes curled and twisted at the ends—the latter condition being probably the result of preservation.

Neuropodial setæ are arranged in 5 or 6 horizontal sub-acicular rows. They are relatively short and stout and perfectly colorless and vitreous. The curved stems are deeply cupped, and toothed along the more prolonged side. The blades end in a single, rather stout, little hooked tooth, and the dorsal or shorter side is provided with a moderately

strong fringe best developed on the shorter blades, which also exhibit an aggregation of some of the terminal hairs to simulate an accessory tooth. On the ventral setæ the blades seldom exceed a length of twice the diameter of the end of the shaft, while those of the 3 or 4 setæ in the dorsalmost row are narrower and 4 or 5 times as long as the distal end of the shaft.

Although all of the specimens examined are fully mature and have the body cavity filled with ova or sperm, the alimentary canal is complete and well developed, extending continuously from mouth to anus without exhibiting any of that occlusion or degeneration seen in many sexually mature syllids and other annelids.

The type and about a score of cotypes are No. 1,091 of the Academy's collections. Taken on the "surface in a lead 4 miles from shore by Mr. E. A. McIlhenny at Point Barrow, Alaska."

***Ammotrypane brevis* sp. nov.**

The type of this species is a somewhat contracted specimen 15 mm. long, 1.5 mm. broad and 1.9 mm. high in the middle, being therefore rather robust and tapering to both ends. The general resemblance to *A. aulogaster* is close, but if the differences exhibited by the single specimen prove to be constant the two species are readily separated.



Ammotrypane brevis.—Parapodium and gill from somite X, $\times 56$.

Instead of being laterally compressed the prostomium is blunt and flattened dorso-ventrally. From it a slight median ridge passes backward and gradually merges into the dorsal curvature of the back. Below this ridge on each side are the small sensory pits or nuchal organs. The mouth is a small trifid opening bounded by a pair of small anterior lobes and a single posterior lobe. Although the body seems to be quite complete and exhibits no indications of regeneration, there are only 29 setigerous somites not distinguishable from one another externally except through the presence of the parapodia. No intersegmental furrows whatever are discernible and the segments pass continuously into one another. Ventrally a pair of stout muscular bands, separated by a deep median groove, produce a somewhat sole-like surface. Above this the body is narrower and strongly arched

and marked only by the small transverse muscle bundles, apparently 4 to each segment.

If perfect, as it appears to be, the pygidium presents striking characteristics. The large median spoon-shaped lobe of *A. aulogaster* is absent and represented only by a minute slender process. The lateral lobes are much larger, obliquely truncated above, and slightly indented at the end.

The parapodia arise from the dorso-lateral surface of the lateral muscle bands and are about equally well developed throughout. They form small but distinct bluntly rounded tubercles produced into a small, conical prominence and apparently unsupported by an aciculum. They bear only a small ventral cirrus and a prominent dorsal branchia, the small dorsal cirrus which has been figured for some species being absent. Branchiæ are absent from the first pair of parapodia, but are present on all of the others. They are largest on the middle segments, where they exceed a millimeter in length and the parapodium in diameter. They are slender and slightly tapering in form and provided along one side with a strongly developed longitudinal muscle, rendering them very contractile.

The setæ are all simple, colorless, tapering, capillary bristles, longitudinally fibrillated and soft in texture. They are arranged in two fascicles, a dorsal of 6 to 10 setæ which reach $\frac{2}{3}$ the length of the branchia, from the base of which they arise, and a ventral which arises from beneath the conical prolongation of the parapodium and contains 5 or 6 setæ less than $\frac{1}{2}$ as long as the dorsal bristles.

Along the sides of the body between the parapodia, but nearest to the succeeding one, are small black or dark brown and very conspicuous eye spots, which are hemispherical in shape and indistinctly faceted on the surface.

The only specimen, a female filled with eggs, is No. 284 of the Academy's collection, taken by Dr. Benjamin Sharp at Icy Cape, Alaska, on August 17, 1895.