

*Dermal triradiate spicules*.—Basal ray straight, tapering from base to sharp point, with a diameter of 0.015 mm.; length inconstant, not exceeding 0.45 mm.; lateral rays straight, cylindrical, rarely longer than 0.25 mm., one and a half times as thick as basal ray, each forming with this latter an angle of about 115°.

*Dermal acerate spicules*.—Slender, spindle-like, attaining a length of 0.1 mm. and a diameter of 0.0025 mm.

*Colour*.—Pale yellowish.

*Habitat*.—Station 145, December 27, 1873; lat. 46° 40' S., long. 37° 50' E.; off Prince Edward Islands; depth, 310 and 150 fathoms.

*Amphoriscus flamma*, n. sp. (Pl. I. fig. 5; Pl. V. figs. 3a-3g).

The species is represented in the collection by a colony of twenty tubular individuals, almost all of which are turned towards the same side, the whole producing the effect of the many tongued flame of a wood fire blown by the wind from the vertical direction. Each individual is provided with an osculum fringed by fine linear acerate spicules. The outer surface of the tubes is bristly, the inner surface is roughened by the apical rays of the gastric quadriradiate spicules. The diameter of the tubes is in different individuals of different sizes, varying from 3 to 7 mm. The average thickness of the walls is 1 mm. The form to which *Amphoriscus flamma* shows the closest relation is *Amphoriscus poculum*, but the presence of quadriradiate, the number of acerate, and the larger size of the subgastric and subdermal triradiate spicules necessitate the establishment of a new species.

*Skeleton*.—The skeleton consists of gastric quadriradiate, of subgastric triradiate, of subdermal triradiate, of dermal triradiate, and of stout acerate spicules, piercing centripetally the wall of the Sponge, and projecting from the outer, often also from the inner, surface, as well as of fine acerate spicules of the osculum.

*Gastric quadriradiate spicules*.—Basal ray straight, either sharply or bluntly pointed, 0.15 to 0.25 mm. long, forming with each of the lateral rays an angle of about 125°; lateral rays curved outwards, of cylindrical form, length varying from 0.3 to 0.45 mm.; apical ray curved, 0.15 mm. long or less, usually sharply, not seldom bluntly pointed, like the lateral rays 0.01-0.0125 mm. thick, the basal ray being either of the diameter of the other rays or rather thicker.

*Subdermal triradiate spicules*.—Of the same form as the corresponding spicules in *Amphoriscus poculum*, but of different dimensions; all rays of the same diameter (0.03 mm.); average length:—basal ray 0.28 mm., shorter lateral ray 0.38 mm., longer lateral ray 0.5 mm.

*Subgastric triradiate spicules*.—Just of the same form as the subgastric triradiate spicules in *Amphoriscus elongatus*, but of larger size; basal ray reaching 0.7 mm., lateral rays 0.36 mm. in length, and 0.045 mm. in diameter. Some are provided with a rudimentary fourth ray.