

1. *Xiphoptera tessaractena*, n. sp.

Four equatorial spines in the outer third crossed by two opposite transverse apophyses, each of which bears on its distal side two to three branches, perpendicular to the apophysis and parallel to the spine itself. Sixteen other spines much smaller, in the outer third crossed by two simple opposite transverse apophyses.

Dimensions.—Length of the four major spines 0.18, of the sixteen minor 0.05 to 0.1.

Habitat.—North Pacific, Station 238, surface.

2. *Xiphoptera dodecactena*, n. sp. (Pl. 131, fig. 3).

Four equatorial spines one and a half times to twice as long and broad as the eight tropical spines. These twelve spines have the same form and are crossed in their distal third by two large opposite transverse apophyses, each of which bears on its distal side two to four branches, perpendicular to the apophysis and parallel to the spine. Eight polar spines much smaller than the twelve others, simple, without apophyses. The central capsule of this species exhibited a conical protuberance around the base of each individual spine.

Dimensions.—Length of the twelve larger spines 0.1 to 0.2, of the eight smaller 0.02 to 0.06.

Habitat.—Central Pacific, Station 272, surface.

3. *Xiphoptera icosactena*, n. sp.

Four equatorial spines about twice as long and four times as broad as the sixteen other spines. All twenty spines crossed in the outer third by two large opposite transverse apophyses, each of which bears on its distal side two to four branches perpendicular to the apophysis and parallel to the spine itself.

Dimensions.—Length of the four equatorial spines 0.26, of the sixteen smaller 0.11 to 0.14.

Habitat.—South Pacific, Station 288, surface.

Genus 340. *Lithoptera*,¹ J. Müller, 1858, Monatsber. d. k. preuss. Akad.
d. Wiss. Berlin, p. 155.

Definition.—Quadrilonchida with two opposite branched and latticed apophyses, either on each radial spine or only on a part of the twenty spines.

The genus *Lithoptera*, founded by Johannes Müller in 1858 for the first observed Mediterranean species, *Lithoptera fenestrata*, differs from all other Quadrilonchida in the fenestrated form of the apophyses, which he compared to the sails of a wind-mill. This peculiar fenestration is effected by two to four parallel pairs of opposite apophyses, which are crossed by perpendicular branches, parallel to the spine itself.

¹ *Lithoptera* = Stone wing; λίθος, πτερόν.