

*Dimensions.*

Length, total, . . . . .	70 mm.	
End of body to mantle-margin, . . . . .	12 „	
End of body to eye, . . . . .	18 „	
Breadth of body, . . . . .	16 „	
Breadth of head (including the eyes), . . . . .	16 „	
Diameter of largest sucker, . . . . .	0.75 „	
		Right. Left.
Length of first arm, . . . . .	50 mm.	45 mm.
Length of second arm, . . . . .	45 „	52.5 „
Length of third arm, . . . . .	17.5 „	20 „
Length of fourth arm, . . . . .	32.5 „	27.5 „

*Tremoctopus atlanticus* (d'Orbigny), Steenstrup.

1835. *Octopus (Philonexis) atlanticus*, d'Orb., Amér. mérid., p. 19, pl. ii. figs. 1-4.

1838. *Philonexis atlanticus*, d'Orb., Céph. acét., p. 98; Poulpes, pl. xvi. figs. 4, 5.

*Habitat.*—North Atlantic between Tenerife and St. Thomas, Danish West Indies; surface. Fourteen specimens (6 ♀, 8 ♂).

Tropical Atlantic (d'Orb.).

The male specimens from the North Atlantic present a very interesting series of graduated sizes, illustrating the gradual development of the hectocotylus. The smallest had a mantle of 2.5 mm. in length, the position of the third right arm was occupied by a small round process, of about 0.75 mm. in diameter; in another, where the mantle was about 3 mm. in length, the hectocotylus was 1.5 mm. in diameter, while a third, with a mantle 4.5 mm. long, had a hectocotylus 2.5 mm. in diameter.

*Tremoctopus gracilis* (?) (Eydoux et Souleyet), Tryon (Pl. XIII. figs. 8, 9).

1852. *Octopus gracilis*, E. et S., Voy. "Bonite," p. 13, pl. i. figs. 8, 9.

1879. *Tremoctopus gracilis*, Tryon, Man. Conch., vol. i. p. 131.

*Habitat.*—Western Pacific, between Papua and Japan; surface. One specimen, ♂. North Pacific, lat. 8° N., long. 106° W. (E. and S.).

I cannot with satisfaction refer this specimen to any of the known species of *Tremoctopus*, but it appears to agree fairly with the form described by the naturalists of the "Bonite," although their diagnosis is by no means so complete as might have been wished. In the present case the most striking peculiarity is in the formation of the hectocotylus, and that perhaps they had no opportunity of observing.

The third right arm is as usual absent, but instead of its place being occupied by a round sac, there is seen beneath the skin a narrow white thread disposed in an elliptic