

BICOLORATION IN THE SPINY LOBSTER PANULIRUS ARGUS (LATREILLE)

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The scientific literature registers several cases of bicoloration in American and European lobsters of the family *Homaridae*. Such abnormalities have been considered gynandromorphism or hermaphroditism. However, the association of this abnormal pattern of coloration with the gynandromorphism in *Homarus americanus* Milne Edwards, has been duly verified (Chace Jr. & Moore, 1959).

As it appears, no case of bicoloration in tropical lobsters of the family *Palinuridae* has been reported up to the present. Therefore, special interest enhances the communication we present hereby.

In the last quarter of 1963, a male spiny lobster of the species *Panulirus argus* (Latreille) with 23.8 cm in total length was caught in front of the Mucuripe Beach (Fortaleza, Ceará, Brazil), showing a great difference of coloration between the two sides, limited by the symmetric plane of the body, this bicoloration being clearer on the dorsal surface of the animal than on the ventral surface (figure 1).

We examined carefully the external sex characters of the bicolored spiny lobster and they are in accordance with those that are characteristic of the males of the species, very well known and widely cited in the specialized literature (Paiva, 1960).

In previous paper (Paiva, 1960), we found sexual dimorphism in length relations of the spiny lobster *Panulirus argus* (Latreille), namely: total length/cephalothorax length, total length/abdomen length, abdomen length/1st abdominal tergite length, abdomen length/2nd abdominal tergite length, abdomen length/5th abdominal ter-

gite length and abdomen length/telson length. With basis in the regression equations presented, we calculated the lengths involved in the above relations for normal males and females with 23.8 cm of total length. After comparing the values calculated with the corresponding values found in the bicolored spiny lobster male, we verified that this specimen differs widely of the normality patterns (table I). The main differences presented by the bicolored spiny lobster male was reduction of the cephalothorax length and of the telson length, and the elongation of the abdomen length.

When we separated the cephalothorax from the abdomen we found on both sides gonads with typical macroscopic aspects of the males. We removed small portion of the medium part of each gonad to make histological transverse cuts. From the histological preparations obtained (figure 2) we verified the existence of histological structures typical of the male gonads of normal individuals of the species, comparable with those presented in the paper of Mota & Tomé (1965).

In the last quarter of 1964, another bicolored spiny lobster of the species *Panulirus argus* (Latreille) was caught in front of the same beach. From this specimen we obtained only the abdomen, which presented typical female pleopods. We were unable to measure this abdomen because its 1st tergite was incomplete, as well as its telson.

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TABLE I

Calculated measures for the normal individuals of *Panulirus argus* (Latreille), with 23.8 cm of total length, and the corresponding measures taken on the bicolored male of this species.

Lengths	Calculated values for the normal individuals (cm)		Values found in the bicolored male (cm)
	males	females	
cephalothorax	11.5	10.9	8.8
abdomen	12.9	13.4	15.2
1st abdominal tergite	2.5	2.5	2.2
2nd abdominal tergite	3.9	3.2	2.7
5th abdominal tergite	2.3	2.6	2.0
telson	5.5	6.3	4.6

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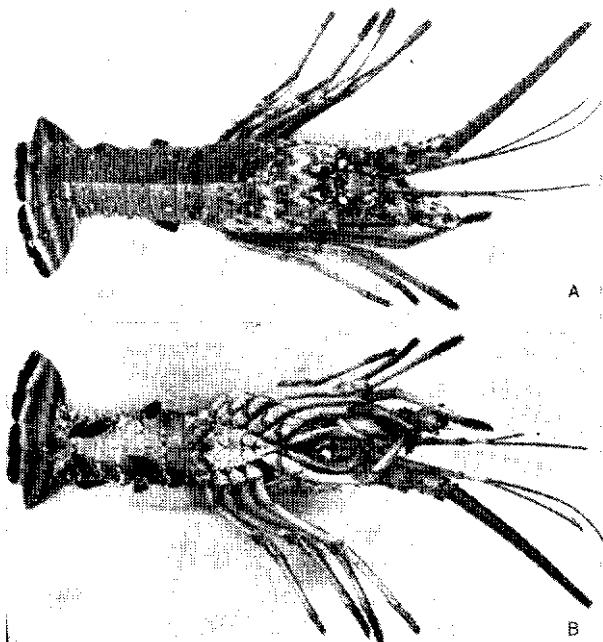


Figure 1 — The bicolored male of *Panulirus argus* (Latreille): a — dorsal view, b — ventral view.

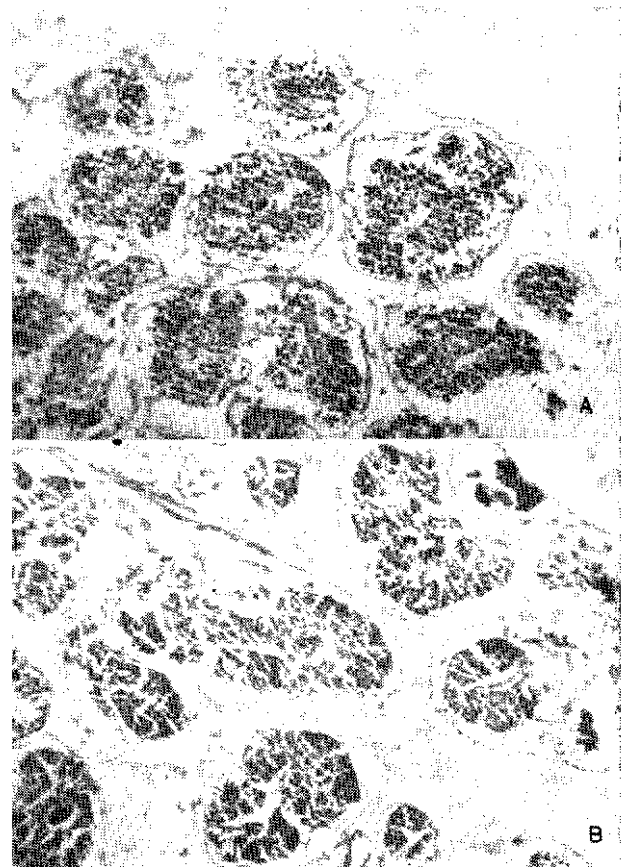


Figure 2 — Histological cuts of the gonads of the bicolored male of *Panulirus argus* (Latreille): a — right gonad, b — left gonad.