

## Record of the St. Helena deepwater scorpionfish, *Pontinus nigropunctatus* (Günther) (Scorpaeniformes: Scorpaenidae), in the Saint Peter and Saint Paul Archipelago, Brazil

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**Abstract.** An individual of the scorpaenid St. Helena deepwater scorpionfish, *Pontinus nigropunctatus* (Günther, 1868) was caught by a fisherman close to the rocks of the Saint Peter and Saint Paul Archipelago, Brazil (0°55'N; 29°21'W). It is the first record of the species for the archipelago, early reported only as an endemic species of the St. Helena Island. The specimen measured 42.5 cm total length, weighed 1100 g, and was caught by hand line at night at 150 meters local depth.

Key words: Endemic species, new record, Atlantic archipelago, deepwater fish, bottom hand line.

**Resumo. Registro do peixe-escorpião-de-água-profunda-de-Santa-Helena** *Pontinus nigropunctatus* **(Günther) (Scorpaeniformes: Scorpaenidae), no Arquipélago de São Pedro e São Paulo, Brasil.** Um exemplar de peixe-escorpião, o peixe-escorpião de Santa Helena, *Pontinus nigropunctatus* (Günther, 1868), foi capturado por um pescador próximo ao Arquipélago de São Pedro e São Paulo, Brasil (0°55 N; 29°21 W). É o primeiro registro da espécie para o arquipélago, anteriormente reportado somente como espécie endêmica da Ilha de Santa Helena. O espécime mediu 42,5 cm de comprimento total, pesou 1100 g, e foi capturado com linha de mão durante a noite a 150 m de profundidade local.

**Palavras chave:** Espécies endêmicas, novo registro, arquipélago Atlântico, peixe de profundidade, pesca de mão de linha de fundo.

An individual of the scorpaenid St. Helena deepwater scorpionfish, *Pontinus nigropunctatus* (Günther, 1868) (Fig.1), was caught by a fisherman close to the rocks of the Saint Peter and Saint Paul Archipelago (SPSPA), Brazil (0°55'N; 29°21'W). It is the first record of the species for the SPSPA, early reported only as an endemic species of the St. Helena Island (Edwards & Glass, 1987; Trunov, 2006). The specimen was caught on 17 July 2007, at night (21:00 local time), during bottom hand line fishery, by a fisherman of a tuna boat that operate around the archipelago. The specimen measured 42.5 cm total length, weighed 1100 g, and was caught at 150 meters local depth with a chunk of flying fish (*Cheilopogon cyanopterus*) as bait. After retrieved, the fish was stored frozen for posterior identification.

The SPSPA, a group of small rocky islands 1100 Km from extreme east Brazil (Fig. 2), is an important fishing ground particularly for tunas, wahoo, sharks and flying fishes. Recent information concerning SPSPA ichthyofauna was published by Vaske *et al.* (2005), where a total of 116 taxa were recorded, 100 at the species level, eight at the genus level, and eight at the family level. Fifty two species were considered reef fishes and 64 were pelagic species. Former records of scorpaenids for the SPSPA, indicate the presence of two species. *Scorpaenodes insularis* (Eschmeyer, 1971) is an endemic species of islands from Meso-Atlantic



Figure 1. Deepwater scorpionfish, Pontinus nigropunctatus from Saint Peter and Saint Paul Archipelago.

Ridge, SPSPA, Ascension and St. Helena Islands, who inhabit waters from 5 to 35 meters depth in the SPSPA (Lubbock & Edwards, 1981). Another report is *Scorpaena* sp. cited by Feitoza *et al.* (2003).

St. Helena lies in the South Atlantic Ocean, east of the mid-Atlantic Ridge, 1,913 km west of Angola and 3,284 km east to southeast of Brazil. The nearest island is Ascension, 1,296 km northwest. The coastal waters of St. Helena support 10 endemic fish species, a further 16 shared only with Ascension Island (Edwards & Glass, 1987). Oceanic sites experience extreme isolation and relatively small shallow water area, thus diminishing the chances of larval input from the continental margins as well as limiting the availability of suitable habitats for the adults (Floeter et al., 2001). Only after the mid-1990s, a significant increase in sampling effort resulted in some knowledge of the Brazilian reef fish fauna (Floeter & Gasparini, 2000, 2001; Floeter et al., 2001; Joyeux et al., 2001, Luiz Jr. et al., 2007; Rocha & Rosa, 2001; Feitoza et al., 2003). Nevertheless, the Brazilian reef fish community beyond 30 m remains broadly unknown (Feitoza et al., 2005). Cluster analysis of the zoogeographic affinities between the deep reefs off the hump of Brazil and other western Atlantic sites, pointed out the isolation of fish fauna of the SPSPA (Feitoza et al., 2005). According Feitoza et al. (2003), SPSPA should be considered as an impoverished outpost of the Brazilian province. This fact is observed in the SPSPA, where representatives of some continental species also occur, like Epinephelus itajara and Lutjanus purpureus (VaskeJr. *et al.*, 2006), and the new westward record of *P. nigropunctatus* in the present study, that is considered a Vulnerable (VU) species by IUCN (2004), and evidence the connection with isolated islands of the Mid-Atlantic Ridge.



**Figure 2.** Main islands of central Atlantic. SPSPA – Saint Peter and Saint Paul Archipelago; AI – Ascension island; FNA – Fernando de Noronha Archipelago; SHI – Saint Helena Island; TMVA – Trindade and Martin Vaz Archipelago.

The Saint Peter and Saint Paul Archipelago is an important scientific ground for biodiversity and zoogeographic studies because it is situated in the path of the South Equatorial Atlantic current that flows westward, and the North Equatorial undercurrent that flow eastward, that may strongly influence in the species distribution, specially in the unexplored habitat at depths beyond 150 m, which may hide a greater number of unknown species.

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## References

- Edwards, A. J. & Glass, C. W. 1987. The fishes of Saint Helena Island, South Atlantic Ocean, Journal of Natural History, 21: 617–686.
- Feitoza, B., Rocha, L. A., Luiz-Jr, O., Floeter, S. R. & Gasparini, J. L. 2003. Reef fishes of Saint Paul's Rocks: new records and notes on biology and zoogeography. Aqua Journal Ichthyology and Aquatic Biology, 7(2): 61-82.
- Feitoza, B. M., Rosa, R. S. & Rocha, L. A. 2005. Ecology and zoogeography of deep-reef fishes in northeastern Brazil. **Bulletin of Marine** Science, 76(3): 725–742.
- Floeter, S. R. & Gasparini, J. L. 2000. The southwestern Atlantic reef fish fauna: composition and zoogeographic patterns. Journal of Fish Biology, 56: 1099-1115.
- Floeter, S. R. & Gasparini, J. L. 2001. Brazilian endemic reef fishes. Coral Reefs, 19: 292.
- Floeter, S.R., Guimarães, R. Z. P., Rocha, L. A., Ferreira, C. E. L., Rangel, C. A., & Gasparini, J. L. (2001). Geographic variation in reef-fish assemblages along the Brazilian coast. Global Ecology and Biogeography, 10: 423–431.
- IUCN, 2007. Red List of Threatened Species. (www.iucnredlist.org).

- Joyeux, J.C., Floeter, S. R., Ferreira, C. E. L. & Gasparini, J. L. 2001. Biogeography of tropical reef fishes: the South Atlantic puzzle. Journal of Biogeography, 28: 831-841.
- Lubbock, R. & Edwards, A. J. 1981. The fishes of Saint Paul's rocks. Journal of Fish Biology, 18: 135-157.
- Luiz Jr., O. J., Joyeux J. C. & Gasparini, J. L. 2007. Rediscovery of *Anthias salmopunctatus* Lubbock & Edwards, 1981, with comments on its natural history and conservation. **Journal of Fish Biology**, 70: 1283–1286.
- Rocha, L. & Rosa, I. L. 2001. Baseline assessment of reef fish assemblages of Parcel Manuel Luiz Marine State Park, Maranhão, north-east Brazil. Journal of Fish Biology, 58: 985– 998.
- Trunov, A. 2006. Ichthyofauna of seamounts around the island of Ascension and St. Helena Island (Atlantic Ocean). **Journal of Ichthyology**, 46(7): 493-499.
- Vaske Jr., T., Lessa, R. P., Nóbrega, M. F., Montealegre-Quijano, S., Santana, F. M., Bezerra Jr., L. 2005. A checklist of fishes from Saint Peter and Saint Paul Archipelago, Brazil. Journal of Applied Ichthyology, 21(1): 75-79.
- Vaske Jr., T., Lessa, R. P., Nóbrega, M. F., Amaral, F. M. D., Silveira, S. R. M. (EDS.). 2006.
  Arquipélago de São Pedro e São Paulo: Histórico e Recursos Naturais. 10 capítulos, 124 figuras, 191 p. Editora Livro Rápido Elógica, Olinda.

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