

# Predation on the invasive red lionfish, *Pterois volitans* (Pisces: Scorpaenidae), by native groupers in the Bahamas

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**Fig. 1** Nassau grouper, *Epinephelus striatus*, with red lionfish, *Pterois volitans* dissected from stomach following capture on 5 March 2008. The lionfish was orientated in the stomach as shown



**Fig. 2** Red lionfish, *Pterois volitans*, photographed on 2 March 2008 south of New Providence, Bahamas

On 26 January 2008, a tiger grouper, *Mycteroperca tigris* (472-mm standard length [SL]), was caught off New Providence (25°04.6′N, 77°20.6′W), Bahamas and found to contain a single red lionfish, *Pterois volitans* (61-mm SL) in its stomach. This observation was considered an anomaly given both the venomous nature of lionfish, and their relatively recent introduction to the Bahamas (Snyder and Burgess 2007).

Anecdotal evidence provided by fishers, however, suggested that native grouper species were preying on red lionfish with some regularity. Subsequently, five Nassau groupers, *Epinephelus striatus*, caught off Eleuthera Island (25°10.0′N, 76°14.0′W) at an approximate depth of 14 m on 5 March 2008, were dissected. Two of the stomachs contained red lionfish. The first grouper (477-mm SL) contained a partially digested lionfish, identifiable only by the morphology and multiplicity of the remaining fin rays. The second slightly larger grouper (482-mm SL) contained a red lionfish of 137-mm SL which was in almost pristine condition (Fig. 1).

The successful invasion and establishment of the piscivorous red lionfish in western Atlantic waters (Fig. 2) (Whitfield et al. 2002; Snyder and Burgess 2007) have led to concerns over its potential impact on native fish biotas. To our knowledge, this is the first documented evidence of introduced red lionfish being preyed upon by native species within their novel range.

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## References

- Snyder DB, Burgess GH (2007) The Indo-Pacific red lionfish, *Pterois volitans* (Pisces: Scorpaenidae), new to Bahamian ichthyofauna. *Coral Reefs* 26:175
- Whitfield PE, Gardner T, Vives SP, Gilligan MR, Courtenay Jr WR, Ray GC, Hare JA (2002) Biological invasion of the Indo-Pacific lionfish *Pterois volitans* along the Atlantic coast of North America. *Mar Ecol Prog Ser* 235:289–297

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