Catfish *Plotosus lineatus* are prey for the rare seasnake *Hydrophis major* in New Caledonia

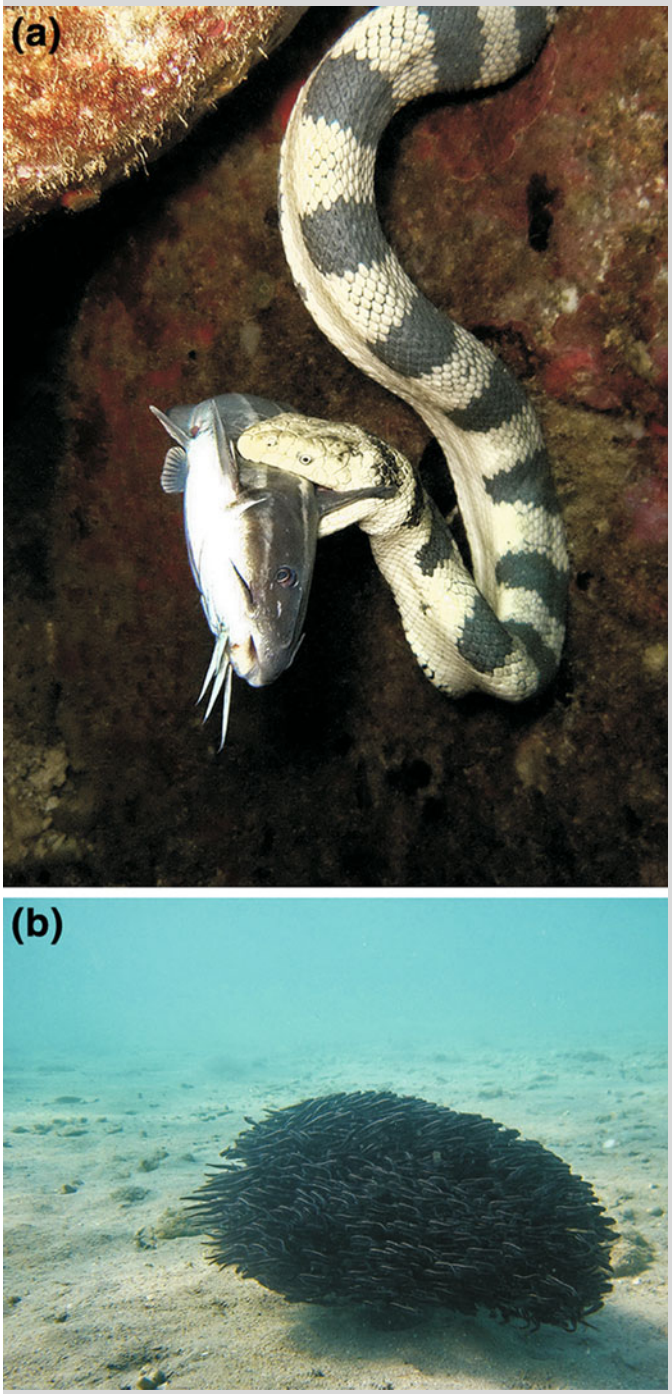

Fig. 1 **a** Adult *H. major* (1.5 m) catching a 25–30-cm TL *P. lineatus*, SW lagoon of New Caledonia. **b** Typical aspect of a large school of small *P. lineatus* targeted by *H. major* during observation. Credits/photographs: Jack Berthomier, with permission

Seasnakes are potential major predators in coral reef ecosystems (Ineich et al. 2007) but remain poorly studied. In New Caledonia, 14 species of seasnakes are reported but only *Laticauda laticaudata* and the endemic *L. saintgironsi*, widely distributed around the island, are abundant on most reefs and islets within the lagoon (Brischoux et al. 2011). Other seasnakes remain largely unstudied, and there are no reliable observations of most species.

Hydrophis major is distributed from New Caledonia to South Papua New Guinea and northeast Australia. Observations were made from July 2010 to July 2011, totalizing about 600 h of snorkeling (N ≈ 110 dives) at depths of 0–25 m in the SW lagoon of New Caledonia. In total, only 9 *H. major* were seen, that is, 0.015 individual.h^{-1}, always between depths of 0 and 5 m (Jack Berthomier, personal communication). The surface area explored can be approximately estimated at 500 m^2.h^{-1}, resulting in a mean density of *H. major* of 0.3 individual.ha^{-1}. Thus, each observation of this seasnake is a rare event and must be recorded.

Among the 9 seasnakes seen, predation on fish was observed 4 times and always involved *Plotosus lineatus*. One attack, by a seasnake of about 1.5 m, occurred at dusk and targeted a fish of 25–30 cm TL belonging to a small group of fish (<10 individuals) hiding in a reef cave (Fig. 1a). The other three successful attacks (seasnakes of about 1.0–1.2 m) occurred in the afternoon and focused on several small fish individuals (5 cm TL) belonging to large schools (Fig. 1b). The diet of *H. major* is poorly known, but the rare existing literature reports *P. lineatus* as possible prey (Voris and Voris 1983). Our observations, thus, clearly reinforce this view and also highlight that fish venom and spines like those found on *Plotosus* spp. are not effective defense against predators such as seasnakes.

References

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