

## Habitat choice and hunting behaviour of the alligator pipefish, *Syngnathoides biaculeatus*, in captivity

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The alligator pipefish, *Syngnathoides biaculeatus*, is a cryptic species commonly found in seagrass meadows. The fish is shy and slow, and it is unknown how the predaceous fish hunts its mobile prey. This study determined its feeding behaviour in an artificial setting of open and vegetated area in an aquarium. Fish behaviour was observed and studied during the early feeding and post-feeding event. The behaviour of 14 pipefish was individually recorded for a duration of 10 min each for each event, and recorded events were replayed and scored using an event recorder. Fish behaviour and duration were scored following an ethogram based on categories of habitat preference (vegetated/open), body orientation (horizontal/vertical), grasping behaviour (using prehensile tail) and hunting approach (horizontal front/vertical front/horizontal rear/vertical rear). Results showed a greater habitat preference for the vegetated area compared to the open area for both sexes. The pipefish also displayed side rolls resembling the moving blade of seagrass in its natural habitat. There was no orientation preference in either sex, nor between early feeding and post-feeding stages. Non-grasping behaviour was favoured after introduction into the tank and during early feeding by both sexes, while the grasping behaviour was favoured during post-feeding. The pipefish adopted a target-locking strategy while mimicking the seagrass movement as it approached its prey. The ambush strategy was adopted while waiting for its prey to approach it within striking distance. Each pipefish showed four hunting approaches, but there was no concordance on the preferred hunting approach among them. The feeding behaviour of the alligator pipefish incorporating stealth and camouflage appears to show an obligatory dependence on seagrass meadows for its survival.

KEY WORDS: syngnathids, ethogram, feeding, target locking, mimicry, grasping, artificial seagrass setting.

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