



The mysterious pygmy pipehorse

Jamie Watts and **Malcolm Nobbs** have developed an obsession with a tiny fish that challenges the keenest of eyes

I squinted, and edged closer to what looked like a branch of algae or a cluster of hydrozoans. My eye had to adjust to the minute scale of it. More interestingly, my brain had to re-train itself – default setting for me (or indeed for a would-be predator) is that among this scrubby red algae are just more algae, maybe a bryozoan or a hydroid, but certainly not a fish pretending to be a sprig of algae. Yet yes, there it was! Tiny. Unfathomably cute. Exquisitely

ornate. I was looking at Sydney's pygmy pipehorse, one of the smallest and most cryptic fishes on Earth.

It's about the size of a whip goby (the largest individual measured so far was 5.5cm long), but it looks like a seahorse that Pixar has made as cute as possible, then almost straightened it out and finished it off by decorating it with feathers. It's one part pygmy seahorse, one part ghost pipefish and one part red algae.

Over a series of dives I saw more of them, noting that their feathery camouflage varies greatly between individuals; some are almost naked, while others have algae growing on their skin, and ornate feathered antennae and chin barbels.

I've had help getting my eye in and learning some of what little is known about these beautiful little creatures. Andrew Trevor-Jones of the Australian

Museum is one of the few authorities on Sydney's Pygmy Pipehorse. Andrew recognises individuals in the area around Sydney where he frequently dives, by the intricate patterns on their faces, in particular pink markings on their snouts. He also thinks that it is possible that they change colour during their lives.

In 1997 a young Sydney diver, Akos Lumnitzer, brought a tiny pipehorse to the Australian Museum for identification. The fish was sent to one of the world's leading tropical fish specialists, Rudie Kuitert, in Victoria. Rudie realised that the fish was a new species, described it in 2004 and named it in honour of Akos. It now revels in the scientific name *Idiotropiscis lumnitzeri*.

Sydney's Pygmy Pipehorse is known only from New South Wales – from the Sydney area south to Jervis Bay, around rocky coastal reefs from 6 to 30 metres depth. Two other species of *Idiotropiscis* are known from Australian waters; Helen's Pygmy Pipehorse, *I. larsonae* (north-western Western Australia, not seen since 1984) and the Southern Pygmy Pipehorse, *I. australe* (South Australia and southern Western Australia).

As with their cousins the pygmy seahorses, we're almost certainly overlooking or missing other species. No-one knows much about the life cycle of these tiniest of pipefishes. Andrew has seen the same individuals in south Sydney for up to one year so maybe that is their typical life-span.

Their dermal algae growth is presumably linked to their habitat but then why do some pygmies have plenty of algal tassels while near neighbours almost none? They're rather easy to overlook – is their distribution wider than we know? How many broods do they have per year?

I suspect we'll learn more rather soon, as more of us notice them, go looking for them, watch them. Like some of the nudibranchs, now we know about them more of us are going to be paying attention. ●

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