



Title: “Friends”

Description: Snakeskin chiton (*Sypharochiton pelleris*), Marlborough Sounds

Photographer’s name: Noelle Bennett

Where and when: Aussie Bay, Queen Charlotte Sound. April 2021

Sustainability: This photograph is one of seven of chitons that you will find in the *Ecosystems Photography* galleries. Check them all out to read about different aspects of their lives, conservation challenges and ecological significance.

This is called a ‘snakeskin chiton’ because it’s ‘girdle’ that surrounds its 8 armour plates looks like snakeskin. The plates protect the chiton while still being flexible so the chiton can traverse over uneven terrain and cling to curved rock surfaces.

This humble New Zealand mollusc was suddenly thrust into the spotlight early in 2021 when it beat off challengers from all corners of the world to become one of five contenders in Mollusc of the Year 2021. The aim of Mollusc of the Year is to showcase molluscs to the public, encourage research and encourage care for this extremely diverse group that is increasingly threatened. The winning species was to have its whole genome sequenced which would be an invaluable resource that could uncover information that doesn’t currently exist. The snakeskin chiton eventually came in in fourth place. And although that may all sound a bit bizarre, it meant that some much-needed media attention was gained.

I called this photograph “friends” because it shows two chitons snuggled together. Space and shelter are at a premium in the narrow intertidal zone where ecological gradients (exposure, substrates) rapidly change and force species into bands. Intertidal species are therefore often crowded together. However, there can be better reasons to get so close huh? Chitons have separate sexes, and fertilization is usually external. The male releases sperm into the water, while the female releases eggs either individually, or in a long string. In most cases, fertilization takes place either in the surrounding water, or in the “mantle cavity” of the female. The mantle cavity is a hidden space between the chiton’s girdle and body that is flushed with water to help oxygen exchange and excretion.

Photographer’s notes: Chiton are much harder to photograph than you would give them credit for when you first find them. Generally speaking, the only time that they can be found is at low tide with springs giving an even better chance to find them. Snakeskin chiton are a little more forgiving to photograph than green chiton for the reasons mentioned above but at around 30mm, they are still small and that in itself presents challenges. And they may still decide not to pose for you choosing instead to slide off to the darker side of their rock. And that’s without taking into account the light levels and the fact that the chiton may well be wet which adds a whole extra dimension into the equation. But with a bit of patience you can get a beautiful image in a sort of understated way.

Photo specs: This image was focus-stacked using 50 images taken at two unit increments to ensure the whole of the chiton was in sharp focus.

Technical specs: The image was taken using a Panasonic DC-G9 camera and a Panasonic Leica DG Macro-Elmarit 45mm f/2.8 macro lens. Exposure details - 1/100 sec at f5.8 with an ISO 200 and a focal length of 45mm (90mm full frame equivalent)

Digital specs: 7117 x 5478 pixels (38.99MP) @ 300dpi

Key words: chiton, molluscs, snakeskin chiton, Papatua, endemic, tidal zone, Marlborough Sounds, New Zealand, intertidal zone, rocky shores, crowding, reproduction, *Sypharochiton pelliserpentis*, Noelle Bennett, Ecosystems Photography, conservation, sustainability

Price: \$250 (incl. GST) for use of the digital image. Visit www.ecosystemsphotography.com/sales for details & to order, or to get a quote if you would like a high-quality print.

Donation: The price includes a \$100 donation to a sustainability organisation or project of your choice, or otherwise to *iNaturalist NZ – Mātaki Taiao* – <https://inaturalist.nz>.

We recommend that the donation goes to *iNaturalist NZ* because they are supporting a wide variety of community-led biodiversity monitoring programmes throughout New Zealand, including for the intertidal habitats featured in this series of photographs. *iNaturalist* receives species records from citizen scientists, maps the data, and shares the information so that it can be used by scientists, policy makers, and the public. They invite everyone to submit photographs and will find an expert to help by identify the plants and animals in the photographs.

iNaturalist NZ need funds to maintain a database for monitoring long term trends in biodiversity in places like the intertidal where the chitons pictured here were found.

Image ref: NB#030 (please use this reference in all orders and correspondence).

Noelle Bennett
5 December 2021