Native dune critters up close

Harsh and ever changing conditions make life on the beach a challenge for the few hardy creatures that live there. The majority of species that live between the high-tide mark and the dunes are arthropod insects such as sand-hoppers, beetles, spiders, kelp flies, midges, butterflies, bees and wasps.

Source: Auckland Museum.

Sand scarab *Pericoptus truncatus*

The native sand scarab beetle *Pericoptus truncatus* is a large bulky beetle up to 4 cm long and shiny black or dark brown. Their short stocky legs are perfect for pushing through and burrowing into sand. To avoid the scorching summer sun, adult scarab beetles come out at night. If you take a torch to the beach at night you can see them. It is easier to spot the big fleshy whitish larvae that sit curled into a C-shape on partly buried driftwood. The ginger coloured dots along their sides are spiracles, the openings to their breathing system.

Photo: Jessica Costall.

Tiger beetle *Neocicindela tuberculata*

The tiger beetle or moeone/papapa preys on small insects (such as flies) and is well camouflaged on grey-white sand dunes. Birds and asilid flies prey on the beetle and their defense mechanism is to emit a musky smell when disturbed. They have very large wings and are strong short-distance fliers (2-3 m). They are also fast runners.

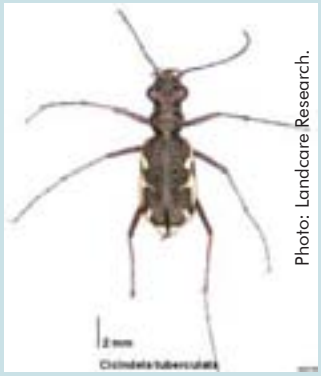

Photo: Landcare Research.

Source: Auckland Museum.

Sandhopper

Corophium acutum

Sand hoppers are amphipod crustaceans that spring up and down when disturbed – hence their name. If a sandhopper is picked up and released in the sand dunes, it hops back across the beach towards the sea. If released a kilometre inland, it will still hop back to its beach. Catch a sandhopper on a Coromandel beach, on the east coast, and release it on a west coast beach and it will hop back towards the east coast.

Native seashore earwig

Anisolabis libboria

The native seashore earwig is common around the New Zealand coastline. It lives above the high-tide line on driftwood and stranded seaweed on both sandy and rocky beaches. The earwig is dark brown and bigger than the common European species that you find in your garden. Earwigs feed on small insects which they attack at speed and crush with their forceps (pincers) at the tail end. You can work out what sex an earwig is by looking at the forceps. In females, the forceps are symmetrical (the right and left are identical in size and shape), but males have the right one more strongly curved than the left.

Source: Auckland Museum.

Katipo

Latrodectus katipo

The katipo spider is famous for being New Zealand's only truly native poisonous spider (to humans). However, it is also among our rarest because of habitat destruction and human activities (such as housing developments, driving and walking over dunes). The Katipo is a highly specialised beach dweller and can only survive in the very fragile sand dune environment. They are only found among the sand dunes of exposed beaches, building webs among spinifex grass and driftwood and feeding on whatever small flying insects they can catch. The best way to help katipo numbers recover, and the best way to avoid being bitten by one, is to stay off the sand dunes or stick to official paths. The survival of this spider is just as important as the survival of any other native species. In the very unlikely event you are bitten by a katipo, seek medical assistance immediately.

Photo: Chris Green.

Copper butterfly

The copper butterfly is relatively small, 24-34 mm across with orange and black wings. It is often seen on pohuehue on the back dunes where it lays its eggs. When hatched the little green caterpillars (very hard to see) feed exclusively on the pohuehue leaves and flowers. Copper butterflies have evolved a strategy for coping with New Zealand's unpredictable climate. In every brood some larvae grow steadily towards maturity, but others stop feeding after just one moult and enter a resting stage (diapause) for several months before continuing their growth some months later. This increases the chance of survival for some offspring if harsh conditions suddenly develop.

Modified from John Early and Virgil Evetts (Auckland Museum), NZ Herald, January 2008.