

The enlarged ventral 'fin' enables the yellow-bellied sea snake to swim forwards and backwards with equal ease.

profound effect on the cyclical weather patterns of El Niño-Southern Oscillation and the Interdecadal Pacific Oscillation. These determine short-term wind, current, and temperature changes. In the La Niña

phase of the southern oscillation, the western Pacific warms, but conversely a warm phase of the Pacific oscillation leads to increased El Niños. The combined effects mean that some years there are none or few records of marine reptiles while in others — 1985, 1989 and 1996-97 are examples — there are many. The 1989 peak in turtle records coincided with a documented influx of warm water that also brought subtropical fish species to New Zealand.

Most turtle and snake reports are in the early part of the year (January-May), although the seasonal pattern varies between species. This will partly reflect occurrence, but the reporting rate will also be more frequent in summer when more people are at the beach or in their boats. Predictably, relatively few of the turtle and snake encounters are of free-swimming animals at sea — most are of animals washed ashore. Disturbingly, around 40 percent of recent turtle records have been of animals entangled by nets or lines, frequently with fatal consequences.

Species of marine reptiles recorded in New Zealand				
Common name	Scientific name	IUCN status	Estimated world population breeding females	NZ records to 2001
Leathery turtle	Dermochelys coriacea	Critically endangered	2,300	74
Loggerhead turtle	Caretta Caretta	Endangered	60,000+	20
Green turtle	Chelonia mydas	Critically endangered	200,000+	46
Hawksbill turtle	Eretmochelys imbricata	Critically endangered	8,000+	19
Olive Ridley turtle	Lepidochelys olivacea	Critically endangered	800,000+	5
Yellow-bellied sea-snake	Pelamis platurus	unlisted	abundant	62
Banded sea-snake	Laticauda colubrina	unlisted	abundant	7

## What to do if you find a snake or turtle

If you are fortunate enough to find or see a sea snake or turtle you should report it as soon as possible to the nearest Department of Conservation office or on 0800 DOC HOTLINE (0800 36 24 68). Regardless of whether the specimen is alive or dead, all observations are important to help determine the occurrence and status of these creatures in New Zealand.

Make good notes on what you have seen or found, including a description (or photos) of the animal, and details of the site and circumstances. Also check to see if a turtle has a tag in its flipper and note the number.

If the turtle or snake is in the sea and in apparently good health just leave it alone. If it is ashore and still alive, leave it where it is and let trained DoC staff deal with it — though it is important to provide shade. If the animal is dead, either move it well above the high tide line or take it to a safe place for later collection. Remember, all sea snakes and turtles are fully protected and must not be harmed or harassed in any way.

Do not handle live sea snakes — their venom is highly toxic and bites can be fatal. This is no reason to fear sea snakes, however, as they will not attempt to bite unless severely provoked. In the unlikely event someone is bitten, keep the victim calm, still and lying down or partially sitting, apply a pressure bandage to the site of the bite, immobilise the limb with a splint or a sling, and immediately contact the nearest hospital and seek treatment with antivenom. The victim should be given water but no food. DO NOT give alcohol or other stimulants, apply tourniquets, put ice on the bite, try to suck out the poison, or make incisions or excisions.

Despite the relatively high proportion of sea snakes and turtles found alive in New Zealand it is unlikely that any are 'resident' here year-round. With the exception of the leathery turtle, which forages into cooltemperate waters, it seems most likely the other species that arrive are part of a constant flow of animals dispersing from breeding populations. These come from along the Queensland coast or further afield in the region of the Coral Sea, and unwittingly ride here on the Tasman Front. Often the animals arriving here are subadult, and there are even records of hatchling loggerhead turtles. With the onset of winter and cooler temperatures it appears most of these animals move on or die — for example a water temperature of 17°C is lethal for a yellow-bellied sea snake — but the predicted rise of 2°C by 2100 may be sufficient that in time some animals could establish here.

If warm currents can bring turtles and sea snakes to our shores with relative frequency,