

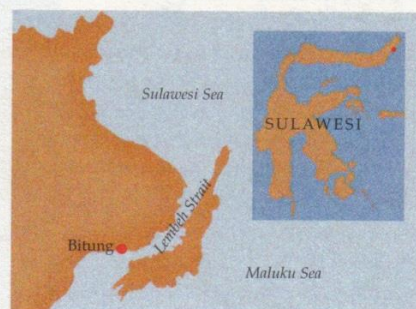


Everything But Dragons In The Ring Of Fire

Lembah Strait on the northeast tip of Sulawesi is the narrow passage between the mainland and rugged Lembah Island. As **Larry and Denise Tackett** discovered, the island has no roads and no vehicles. The area is volcanic and sits just inside the "ring of fire"

Early sea explorers often marked their nautical charts with the phrase "there be dragons in these waters" to indicate an area where no one had been or about which little was known. On our chart for the northern Sulawesi peninsula, we have circled the Lembah Strait area and written "there be magic here".

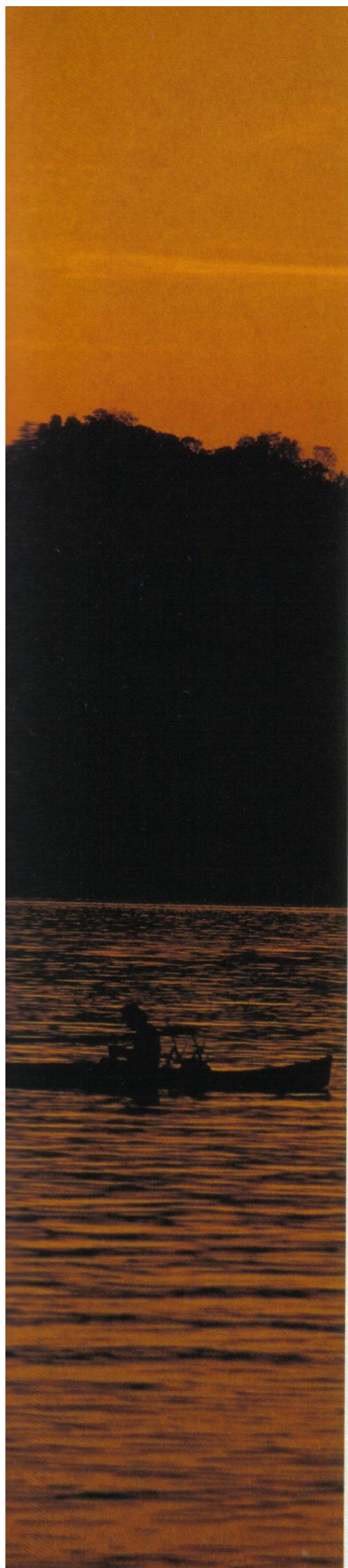
Lembah Strait is on the northeast tip of Sulawesi. It is the narrow passage between rugged Lembah Island and the mainland. The area is dotted with small coastal villages and Lembah is accessible only by boat. There are no roads and no vehicles on the island.



Lembah, along with the mountains of the mainland to the west, forms a natural shield for the port city of Bitung and its coastal area, protecting it from the worst of the northwest and southeast monsoons.

This protection alone was not enough to spur development in the Strait until after 1922 when a freshwater well was discovered in the area.

Top: village children wave farewell to a dive boat; left: a lone fisherman in his canoe at dawn in Lembah Strait





Top: fishing in the strait is a livelihood for some people; above: the catch of the day arrives here in the local beachside fish market where it is sorted and cleaned prior to being sold

During World War II, Japanese ships came here to refill with water and the well earned the name it carries today—Air Perang (War Water). Today Air Perang is still used to provide water to small boats and barges and to supply nearby villages, especially during the dry season when many wells run dry.

The entire area is volcanic and sits on the edge of the “ring of fire”. There are several active volcanoes in the vicinity. The last eruption was by Mt. Lokon in 1986. Southward movement of the Sulawesi Sea under the northern peninsula helps generate deep earthquakes which produce heat and magma, causing much seismic activities.

Although much of the Strait area has been devoted to coconut plantations, several thousand hectares of rain-

forest on the mainland have been set aside as the Tangkoko-Batuangus Nature Reserve. The reserve—within easy reach of Bitung—includes three volcanoes: Tangkoko, Batuangus and the twin-peaked Dua Saudara. There was some minor volcanic activity in the reserve in 1980 but there have been no major eruptions this century.

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Tangkoko-Batuangus is important as a conservation area for many of North Sulawesi's endangered or threatened animals. Anoa (dwarf buffalo), tarsiers, civets and macaques are easily observed here. The sandy beaches provide nesting sites for green and leatherback turtles. The endangered Maleo bird, *Macrocephalon maleo*, which incubates its one large egg in warm volcanic sand, has several nesting sites within the reserve. Hornbills

are often seen and along the coast there is at least one cave with edible swift's nests.

On a boat ride through the Strait you are likely to see several species of terns and boobies cruising the area while groups of 30 or more majestic frigate birds circle overhead. The frigate birds roost on the rocky outcrop of Batu Kapal at the north tip of Lembeh. The terns and boobies have roosting and nesting sites on Lembeh and some of the islands to the north. And you often see white-bellied sea eagles swoop from the sky to pluck a fish from under the water.

The sea provides a livelihood for most of the people of Lembeh and the Bitung area. The local fishing industry supplies most of the fresh fish for the Minahasa region and for the local tuna cannery, which exports its product. A fleet of night fishing boats with four-man crews net baitfish for use both locally and on the bigger offshore tuna boats that supply the cannery. Each tuna boat employs 50 people and goes to sea for a week at a time. From November to February the night fishermen catch small squid (cumi-cumi, a Minahasan delicacy) as they fill the Strait to feed on the small shrimp that congregate here.

Others earn their living by farming and harvesting coconuts for copra production, or on the pearl farms—marked by bright yellow buoys on both sides of the Strait—that are a joint Indonesian-Japanese venture.

As the main port for North Sulawesi, Bitung, with its natural harbour, brings in everything from fuel to foodstuffs for the northern peninsula. The harbour is an official port of entry for tourists and some of the city's busiest days are when passenger ships dock here for their short stays.

The area between Sulawesi and Maluku in Indonesia is probably the most biologically-diverse on earth, with the number of species decreasing in all directions from this centre. About 16 kilometres long and one or two kilometres wide, the Strait funnels water between the Maluku and Sulawesi Seas, carrying large concentrations of plankton which support the abundant and diverse marine life inhabiting these waters. New species are constantly being discovered.

A strong current runs through the narrowest section of the Strait and



closer to land are fringing reefs, patch reefs, mangroves, sandy slopes, overhangs, and swim-throughs. It is here that divers can see the most unusual critters the Strait has to offer. The struggle for space on the reef is fierce and signs are visible everywhere you look. Sponges and corals compete not only with each other but with other marine invertebrates for their own little space on the reef.

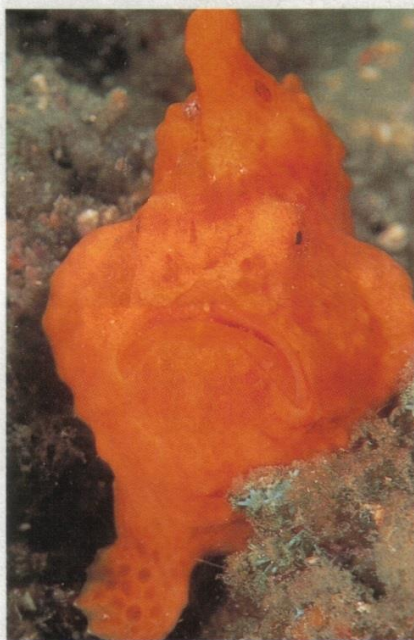
The diversity of feather stars alone is astounding. Not only are they found in every colour of the rainbow, but they house shrimps, crabs and clingfish that are colour-coordinated for camouflage. Likewise with sea cucumbers, soft corals and sea stars that provide havens for assorted invertebrates and small fishes. The same holds true for most other reef animals—finding a suitable spot and then blending in with your surroundings is the key to survival.

Nudibranchs are an exception. Conspicuously-coloured to warn predators of their toxicity, they can wander the reef in relative safety. At least 200 species have been identified here.

Blending in is essential for many fishes too. Think of the more cryptic critters like frogfish, waspfish, devil fish, ghost pipefish and dragonets. The harder they are to see, the better their chances of survival. Yet the observant diver can see them all in this small but magical area.

There are places here where you can see hundreds of cleaner shrimps or so many slender sweepers and silversides that the reef disappears behind them. When the current is running, the tree corals blossom into masses of bril-

Clockwise from above: silversides in the reef; Coleman's shrimp safe within a toxic sea urchin; dwarf lionfish; a frogfish mimics an orange sponge




liant oranges, reds and yellows, overshadowing the other reef invertebrates as their tiny polyps feed on the incoming plankton.

World War II shipwrecks, completely encrusted with marine life, provide havens for innumerable critters. They also make for fascinating dives.

These reef relationships and activities are found the world over, but the frequency and ease with which they are observed here is remarkable. Lembeh Strait has no thousand-foot walls and the visibility cannot compare with that of nearby Manado's Bunaken Marine Reserve, but, for sea-

soned divers and macro photographers who think they have seen it all, this is the place to come.

For those who prefer their marine life larger, chances are good for seeing a humpback whale, a school of pilot whales or a manta ray in the Strait on the way back from a dive.

Its close proximity to Tangkoko-Batuangus Nature Reserve makes this area ideal for promoting ecotourism and scientific study. 

Larry P Tackett and Denise Nielsen Tackett are a photojournalist team currently based in Indonesia