



Lembeh strait is one of the most interesting marine habitats that I know, a real macro paradise and a great place to do scuba diving! I first dived here in 1994 but have come back many times and must have done over a two hundred dives only here, so I know the place rather well. There are over 50 dive sites around the Lembeh strait, most of them are either sandy areas or small reefs. Don't expect spectacular walls or huge reefs, here you are doing so called muck diving - searching for the rare and the special (for more good places for muck diving look at Secret Bay and Padang Bai in Bali, Dauin in Negros, Cabilao in Bohol situated in the Philippines and Mabul in Borneo). I am a frogfish specialist and the Lembeh strait is just full of them. But its also a good place to see other shy critters such as the mimic octopus, the flamboyant cuttlefish, harlequin shrimps, wonderpus, skeleton shrimps and many nudibranchs. The fish at this place are also a collection of weirdoes: Ambon scorpionfish (*Pteroidichthys amboinensis*), stonefish, sea robins, stargazers, devil fish and even the weedy scorpionfish (*Rhinopias frondosa*). There are also beautiful seahorses (we counted at least 7 different species, pygmy and others), pegasus, ghost pipefish and the endemic Banggai cardinalfish.

Although most divers come here for the muck diving, Lembeh has much more to offer. Specially around Lembeh island there are some small but very beautiful coral reefs and at the northern tip at Batu Kapal the currents attract large pelagics like mackerels and sharks. There are also four beautifully covered wrecks, two of them large and all within limits for recreational diving. This area is not a national marine park unfortunately. Water temperatures can sometimes be a bit cold, in July-August it can be until 26 °C, the other months around 28 °C. The sheltered condition of Lembeh Strait makes for year-around diving. The sheltered condition of Lembeh Strait makes for year-around diving.

The main town, Bitung can be reached by car (1 - 1 1/2 hour depending on traffic) from Manado. Bitung is a large, busy harbor full of containerships and fishing boats. In the last few years the town has prospered. In 2007 it was even awarded a prize for being one of Indonesia's cleanest and healthiest city. Situated on the eastern side of the tip of North-Sulawesi, the Lembeh strait (Selat Lembeh) runs between the Sulawesi mainland and Lembeh island to the east and is 22 km long and 2 km wide. There are some interesting white limestone walls and a few smaller islands or rocks (Batu Sandar, Sarena Kecil, Kai-nah) in the middle of the strait and a lava flow visible around Batu Angus (= burnt rock). Lembeh island is also an interesting place with some wildernes areas where Tarsias monkeys, large monitor lizards, birds and land turtles live.

There are 12 dive resorts on either on the mainland or on Lembeh island (2013). You can also organize day trips from Manado / Bangka. Another possibility is to stay on one of the liveboards and spend a few days in Lembeh strait.

### **Muck dive sites in Lembeh**

I noticed, that there are seasonal changes at the dive sites in Lembeh. On one visit a dive site would be just full with nudibranchs eating certain types of algae, an other time of the year they had all gone to some other dive site. At one time ghostpipefishes or seahorses were everywhere, then we had a hard time just finding one. So it is best to get a dive guide who has recently dived around here, because he will know about these changes and the best places to visit. Dive sites on the mainland have dark volcanic sand, those around Lembeh island all have lighter sand.

Police pier (No. 6): This dive site is a real muck dive! There is a lot of garbage lying around, but among this garbage are real treasures! Unfortunately this dive site is not so good anymore (2006), too many ships on the pier. I found two harlequin shrimps (*Hymenocera picta*) on a *Linckia* starfish, under the large columns of the pier there are special waspfishes, many nudibranchs and there are a lot of Barramundi cods and the Banggai cardinalfishes (*Pterapogon kauderi*). They seem to be hiding among the spines of sea urchins and also joining the anemonefish hiding in anemones. The Banggai cardinalfish is actually endemic to the Banggai islands and it was probably introduced to Lembeh strait by dumping some aquarium specimens. Over the years it has spread from here first to the islands in the strait and now to nearly all dive sites on the west side of the strait! Since there are a lot of orange sponges this dive site is a really good place for the orange painted frogfish (*A. pictus*). On one of our dives we found a total of seven while diving here. One of them was a female bloated with eggs with a smaller male guarding her.

Nudi Falls (No. 7): is a small vertical rock wall and below that a slope with dark grey sand and rubble that ends at about 27m. On one dive we went deeper and searched in between the sponges for the weedy scorpionfish (*Rhinopias frondosa*) but didn't find it. Instead I saw some rare spindle cowries (*Phenacovolva tokioi*) and a flamboyant cuttlefish. At the wall there is a *Muricella* gorgonian where you find pygmy seahorses (we saw 7 of them) and there is a crack with two flame file shells hidden.

Sometimes there are strong currents around the deep section on the rubble slope. A year later we finally found the Rhiopias there. On a dive a year later I finally found out, why this dive site is called Nudi Falls - there were nudibranchs everywhere and some like *Risbecia tryoni* were mating in large numbers.

Jahir (No. 14): A dive site with a large sandy area and coral blocks. On my last visit this was an excellent place to see hairy frogfishes. There were three around and to my amazement one was hiding between a dozen of the longspined diadema sea urchins, one fin actually resting on the spines! The other two were busily engaged in courtship. The larger female was bloated with eggs and the smaller male was following her and nudging her all the time. I observed them for quite a long time hoping they would actually rise to the surface and she would release her eggs but this didn't happen and a day later they were still only courting.

Nudi Retreat (No. 17): This dive site is a small and protected cove. On the top resides a pair of pegasus sea moths and a lot of different nudibranchs. A few times we started our dive about 50m north on a beautiful wall covered with soft corals, an other place to dive well worth it. Apart from a several species of nudibranchs we also saw two Coleman shrimps which live on poisonous sea urchins - a rare find!

Teluk Kembahu TK (No. 22): The mimic octopus was first observed here in Lembah Strait. A dive guide noticed, that an unknown species of octopus sometimes looked like a flounder or like a mantis shrimp. Further observation established, that through altering the position of its striped arms, the octopus could also mimic lionfishes, sea snakes, crocodile snake eels, stingrays and jellyfish. We found a mimic octopus while it was foraging for crustaceans and fish by probing with its long arms down holes. When it espied us, it started to mimic a flounder, pressing its arms together, all in one direction and undulating to mimic the way a flounder swims. Later it looked like a sea snake and just before disappearing in its lair like a mantis shrimp. It seems to mostly imitate either poisonous animals or ones that are not particularly tasty, so predators don't want to eat it. It is one of the only octopuses that dares to swim in open water close to the surface - of course mimicking another poisonous animal, a jellyfish! There is another octopus, the wunderpus that looks similar but with a more distinguished color pattern.

Lettuce Surpriz U or Kuda Laut (No. 23) lies on a nice bay with a beautiful view of the volcano - a good place for the lunch break. A lava flow on the northwestern end of the bay forms a series of crater like depressions filled with lettuce corals and other hard corals. The dive operators have given this dive site two names - Lettuce Surpriz U for the lettuce corals where Mandarin fishes (used to) live and Kuda Laut for the seahorses you find here. You dive on a flat slope of black sand with patches of corals and sponges. On one dive we encountered a flamboyant cuttlefish (*Metasepia pfefferi*) laying eggs. She had chosen an overturned half of a coconut to hide her eggs. First she blew some water on the sand under the edge of the coconut to form an opening. Then she stretched her arms and neatly slid them underneath. She was changing colors and then retreated having put her eggs inside the shell. We did also did one dive only in the upper 10m and found a pair of filamented ghost pipefishes (*Solenostomus paegnius*) and crabs walking around with sea urchins on their back and the coconut octopus.

Hairball Two (No. 24): this site is close by and is similar to hairball. On the top there are special sea urchins with cardinal fishes and zebra crabs and large yellow and brown seahorses. These seahorses are amazingly fast. I tried to make a photo and it would start moving really fast so I nearly couldn't follow! I also encountered a juvenile batfish, that looked like a brown leaf (Circular spadefish - *Platax orbicularis*) and another with zebra stripes (Hump-headed spadefish - *Platax batavianus*).

Hair ball (No. 24): at this dive site there is some of the world's best critter diving, a true muck dive site. A gentle slope covered with black sand and algae. Since most of the dive is sand you need a bit of patience, you might dive for a couple minutes and not find anything and then you get surprised by truly rare animals. There are occasional patch of sponges - those are the places to look for hidden animals like seahorses, frogfishes or the Ambon scorpion fish. All these animals are extremely well camouflaged, the frogfish we found was brown and gray with numerous appendages, the seahorses brown or black with alga like growth.

Aw Shucks (No. 26): This dive site is close to the pearl farms in the northern part of Lembah strait. I liked this dive site since we encountered several times a lot of beautiful ghost pipe fish and two yellow double-ended pipefish that look like sticks of whip coral. On the small reef on top there were two yellow leaffish and a large *Notodoris minor* slug, also yellow.

Pantai (or Pante) Parigi (No. 45) lies on Lembah island just close to the huge white limestone formations. The name can be translated with "beach with a well". You dive on light grey sand on a gentle slope. This turned out to be a good place for the Ambon scorpionfish (*Pteroidichthys amboinensis*) and frogfishes (*Antennarius striatus* and *pictus*). These animals were hidden among the algae and some ropes that were lying on the sand. There are also quite a lot of broccoli soft corals with tiny porcelain crabs and egg cowrie snails living on them. On one dive there we saw the rare leafy filefish. From far this filefish looks like a piece of seagrass or weed with its many appendages. There are some patches of corals in the upper area of the dive site with nudibranchs (for example sea hares) and sometimes a leaffish or frogfish.

## **Wreck diving in Lembeh**

a) Tanduk Rusa wreck (Mawali wreck): lies at 1° 26.778' N and 125° 13.536' E. This Japanese freighter burnt and sank in 1943. Rob Sinke from Divers Lodge Lembeh has found a fused compass and melted bottles. He thinks the reason why so much hard coral grows on the wreck is because all the paint was burnt off. It lies on the port side, large poles sticking out. You either start the dive from the propeller or you dive towards the cargo holds and the bow. It is nicely covered with beautiful hard corals. Depths start at 16m and go to 31m.

I visited this wreck first in 94 and we had to get a local fisherman to find it, since there was no buoy attached. You can enter the large cargo holds in front which is very interesting but watch out for your deco time! Don't go into the machine room, this area is much too unstable! When there is a current, the wreck is just chock a block with large lionfish, no place to really hold on to the wreck, because they are everywhere. We also saw shonefishes, jacks, batfish, cuttlefish, quite a few nudibranchs and mantis shrimps. There used to be two frogfish sitting on the poles and a school of glasfish always around them, but our dive guide told us they are gone.

b) Kapal Indah: this is a cargo boat about 45m long and lies between 17 and 24m deep, upright on its keel. It is mostly covered with bryozoans, hydroids and sponges and there are a lot of nudibranchs, some very rare living there and on a large sponge on the top of the deck perched a giant frogfish, ready to devour the fishes around him. After diving on the wreck you can finish the dive on the small coral patches further towards the shore. Close to Kapal indah lies Kapal Baru, a boat that burned and sank recently and lies between 4 and 14 meters. This is a nice place for night dives (only for small dive groups), you see a lot of crabs, nudibranchs and perhaps a ghostpipefish.

c) Bimoli wreck: This is also a Japanese freighter which sank during the second world war. It lies now close to Bitung in the middle of the shipping area. You can sometimes hear ships going by, so it can be very noisy and the visibility is not always very good - also be careful when you surface! Unfortunately when I wanted to dive the wreck this year (2006) we encountered people taking the metal from the wreck to sell for scraps. I wasn't able to dive the wreck, but the police later stopped them from lifting up more material, but large parts were already destroyed, mostly the upper parts but all the interesting parts like the propeller, the gun and bull eyes were gone. I will try to have a look at it next time I am there to see if it is still worth diving here. The Bimoli is about 100m long and the deepest parts lie on 35m. The Bimoli (real name not known) was torpedoed either from air or by submarine (the last is what the locals say) and sank. The ammunition (Bakelite) is still there and I hope nobody is stupid enough to try to lift that too up to the surface. The Rina's wreck and Kapal Baru have also been destroyed by people taking scrap metal from them.

## **Coral gardens and current around Lembeh**

Batu Kapal (No. 28): This dive site is not so well known, but it actually was one of the highlights of my dive vacation! Rob Sinke from Divers Lodge Lembeh is one of the persons that knows this dive site well, so we dived there when currents were strong but not too fierce. You dive on several large submerged rocks which are jutting up from a plateau of about 22 to 27m. Everything is covered with yellow tube corals (Tubastrea) - what a sight it must be during night when they all open - and hard and soft corals. The amount of fish is just amazing, from small Anthias and red tooth triggerfishes, bannerfishes to mackerels, Napoleon wrasses and the occasional shark. The current carries you among the rocks, sometimes you stop and watch the fish soup, sometimes you drift to another current pocket.

If strong currents or waves make it impossible to dive at the pinnacles you might still be able to dive at the wall of the largest rock because it is somewhat more protected there. At 15 meters at the foot of the wall there is a gentle slope with large boulders. At about 22m it suddenly gets steeper with large gorgonian fans and we found sharks, Napoleon wrasses and large schools of snappers.

Dante's Wall (No. 29): You start this dive in a small bay a bit south of Batu Kapal. It is a slope covered with hard corals. Sandy areas reach like long bands down between. Several times on our dive we encountered a large group of barracudas and between we saw some rainbow runners, a group of bumphead parrotfishes which were feeding on the corals and a turtle.

Pulau Putus and Californian dreaming (No. 32 and 33): Most people come to Lembeh for the rare critters, but some dive sites like these have beautiful rich coral growth and colorful reef fishes! Specially look out for the cleaning stations here, apart from the colorful cleaning shrimps you might find some leaffishes or frogfishes there also.

Angel's window (No. 35): This dive site is a large rock with two peaks off the north coast of Lembeh Island that rises to just a few meters below the surface. There is a large swim through at about 25m, and around them are several gorgonian sea fans (*Muricella paraplectana*) with pygmy seahorses (*Hippocampus bargibanti*) and outside there are other gorgonians with the yellow Denise seahorse (*Hippocampus denise*). On the way along the wall we saw many damselfishes mating and on top of the pinnacle we discovered a huge stonefish covered with algae like growth. All around were anthias and damselfish, all the stonefish had to do to get the next meal was to just open its mouth!

Southeast coast of Pulau Lembeh (No. 61 to 67): During the northwest monsoon (November to April) it's also possible to dive on the eastern side of Lembeh island. These dive sites are well worth a visit. Just close by is Pulau Dua (No. 64), a small island with a nice beach where you can eat your lunch. The dive site here is a large and steeply inclined ridge. There was some current when we dived there and fish gathered a plenty, schools of fusiliers and butterflyfishes as well as an occasional mackerel and Napoleon wrasse and a white tipped reef shark was cruising back and forth underneath. On the several dives we did there we always found two or three giant frogfishes perching on the huge brown sponges that grow a plenty on the slope. On the rocky part on the top live octopuses and scorpionfishes and in the crevices more eels and dragonets.

On the coast the coral is also very nice, specially at Jiko I, II and III (No. 63). You dive on a steep slope covered with mostly hard corals and many small animals such as orange utan crabs or nudibranchs to be found. Check out the outcrop of corals in Jiko I (at 25 to 29m), it is teeming with live, small reef fishes, angelfishes, butterflyfishes and groupers.

There is another dive site further north at Batu Bunyan (hidden rock No. 67) there are sharks, eagle rays, bumphead parrotfishes and large pelagic and the boat crew also saw a dugong during one of our dives (but we didn't see it underwater...).

### Night dives in Lembeh

Of course night dives are also specially interesting in Lembeh. As soon as night falls nocturnal critters like crabs, worms, feather stars, cuttle fish and eels appear. Some animals like scorpionfishes are much more active at night, but we also found some ghost pipe fishes and juvenile batfishes on night dives. Most dive sites in Lembeh strait are also good for night dives. I believe that a combination of reef and sand is best to encounter a large range of nocturnal animals. Dive sites like Nudi Falls or Nudi Retreat are also just beautiful, because the tube corals on the walls open their tentacles and the wall becomes a yellow meadow!

Police pier (No. 6): During night you dive on the sandy part and don't go under the pier. This dive site is full of surprises. Not only did we find some of the frogfishes and humpback scorpion fishes that can also be seen during day time, but our dive guide also discovered the rare Bobbit worm. This worm is nocturnal and waits in its lair until a fish or some other animal swims over his head that sticks out of the sand. Then it extends its pincers and strikes, grabs the unfortunate fish and drags it down into its lair. Apart from the Bobbit worm there are of course also a lot of nudibranchs, crabs, shrimps to be seen.

Air Prang (No. 13): South of Air Prang is a small beach with a flat sandy area in front which I found specially good for night dives. Several bobtail squids, huge red and white nudibranchs that bury in the sand during the day and emerge at night, small nocturnal scorpionfishes and of course the usual - octopuses, slugs, frogfishes, shrimps and crabs.

Nudi Retreat (No. 17): This dive site is a small and protected cove. We also did a night dive there and found a ghost pipefish in one of the sponges. The highlight was a juvenile batfish with an orange fringe that looked just like a flatworm! Amazing! We also encountered a sea snake and a huge *Pleurobranchus* snail.

Divers Lodge Lembeh house reef (No. 59 and 60): Start the night dive around half past five and first go to observe the Mandarin fishes (*Synchiropus splendidus*) while they are mating. They live in rubble, mostly broken staghorn corals and during the day they are very well hidden. But around 5 o'clock (dusk) they start to forage among the corals and it is easy to find them. We went several evenings in a row and found, that once it gets dark they start their courtship dance. The male (larger) displays his dorsal fins to attract the female. Soon they rise together from their lair, side by side, and head for open water to release spawn and eggs. After this spectacular experience you can continue to the nocturnal seahorses (probably *Hippocampus mohnikei*) which live in the staghorn corals close by. These seahorses are very agile and climb around in the branches to search for food. There is plenty more to see - featherstar crabs, nudibranchs, moray eels and with luck a sleepy ghost pipefish.

