



Now you see him, now you don't: a big Tasselled wobbegong *Eucrossorhinos dasypogon* lies in ambush among the corals of West Papua's Raja Ampat reefs. Notice the fleshy frills around its mouth - the "tassels" which give this species its common name.

CELEBRATING WEST PAPUAN CARPET SHARKS

# THE WOBBERGONGS OF RAJA AMPAT

Beautifully adapted to an ambush predator existence, Wobbegongs rely on their exquisitely cryptic coloration to avoid detection and catch their prey by surprise



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PHOTOS BY ANDREA & ANTONELLA FERRARI

*W*obbegongs - also commonly known as Carpet sharks due to their velvety and highly ornamented livery - are currently grouped into three genera and eleven species. All are found in the Western Indo-Pacific, mostly in shallow Australian and Indonesian waters: their common name derives from the Australian aboriginal language, meaning "shaggy beard" and referring to the flaps

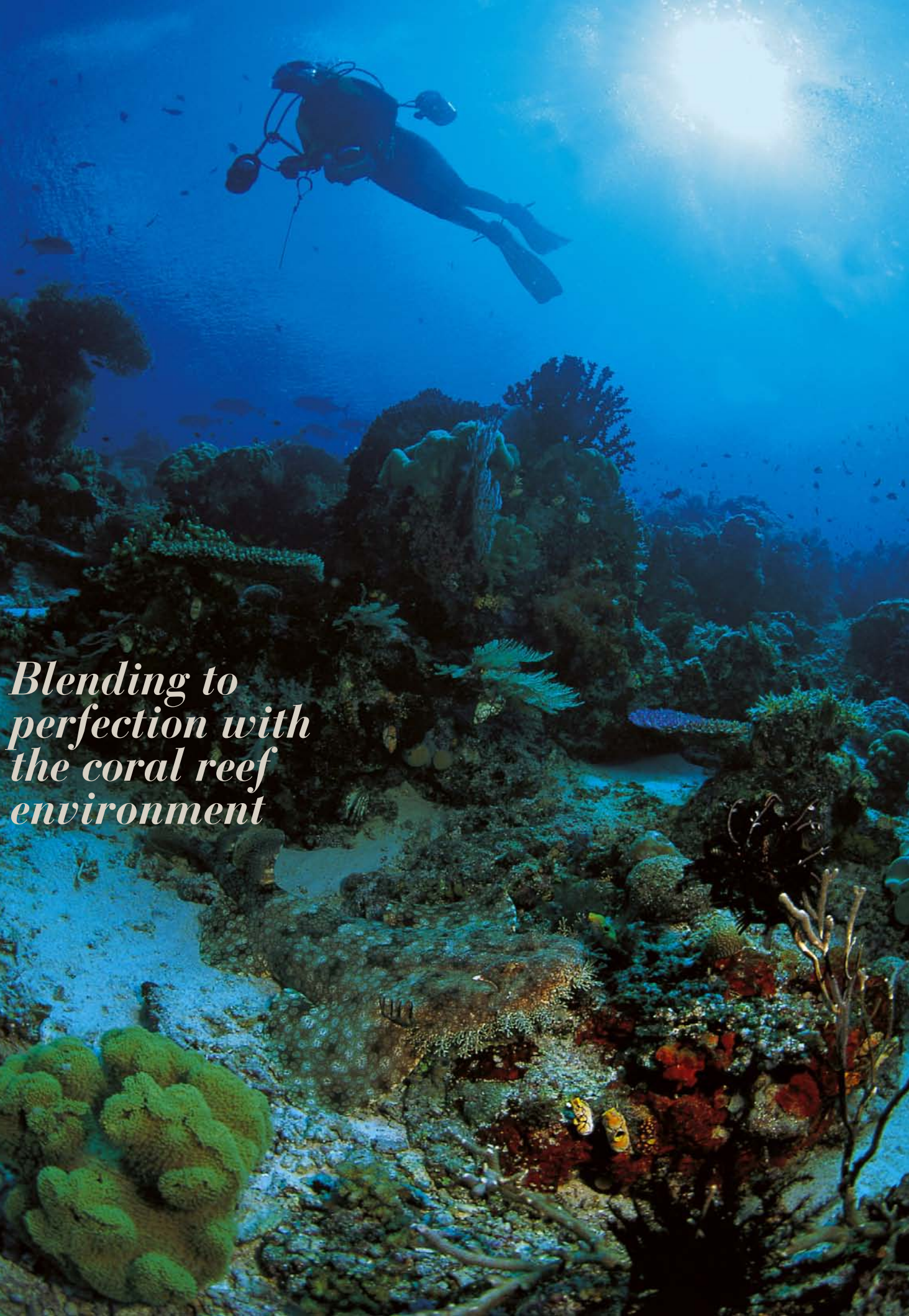
and tassels growing around their wide mouths. The specimens featured in these pages were all photographed during several separate dives in the Raja Ampat area (an archipelago of four large islands and several islets located in front of the Vogelskop peninsula), and are easily identified as Tasselled wobbegongs *Eucrossorhinos dasypogon*, a species frequently observed in West Papuan

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Unlike free-swimming sharks, Wobbegongs are able to breathe while lying still thanks to the presence of the spiracle - a modified gill slit found behind the eye - which actively pumps in oxygenated water.







*Blending to perfection with the coral reef environment*

Two good examples of the Tasseled wobbegongs' extraordinary camouflage, an evolutionary adaptation which allows these benthic predators to blend perfectly with their reef environment. Notice in the far left image the presence of two bright white "false eye" spots behind the real ones, evolved to avoid bites and nips by other predators, noticeably triggerfish.



waters, where it reaches a maximum size of 1,30 meters (the largest species of Carpet shark, the Spotted wobbegong *Orectolobus maculatus*, is found in Western Australia, where it grows up to an imposing 3.2 meters). Only one of these - clearly identified in the caption of this page - is a very rare and apparently still undescribed Indonesian species which we have photographed in Bali.

Most Carpet sharks are rather small, but in fact they belong to the same order - the Orectolobiformes - of the Whale shark *Rynchodon typus*, the biggest living fish in the world.

Their muscular body wide and flat, finely patterned in yellowish and pale blue-grey spots, bands and rosettes neatly arranged on a light tan background,

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A very rare fish indeed - this is the only known photo of a yet undescribed Indonesian Wobbegong species we photographed while diving in Bali's freezing waters off Nusa Penida, where it shared a small cave with a large Moray. It might be present in Raja Ampat too. Notice the differences in pattern and coloration and the sparse, reduced tassels by the mouth.

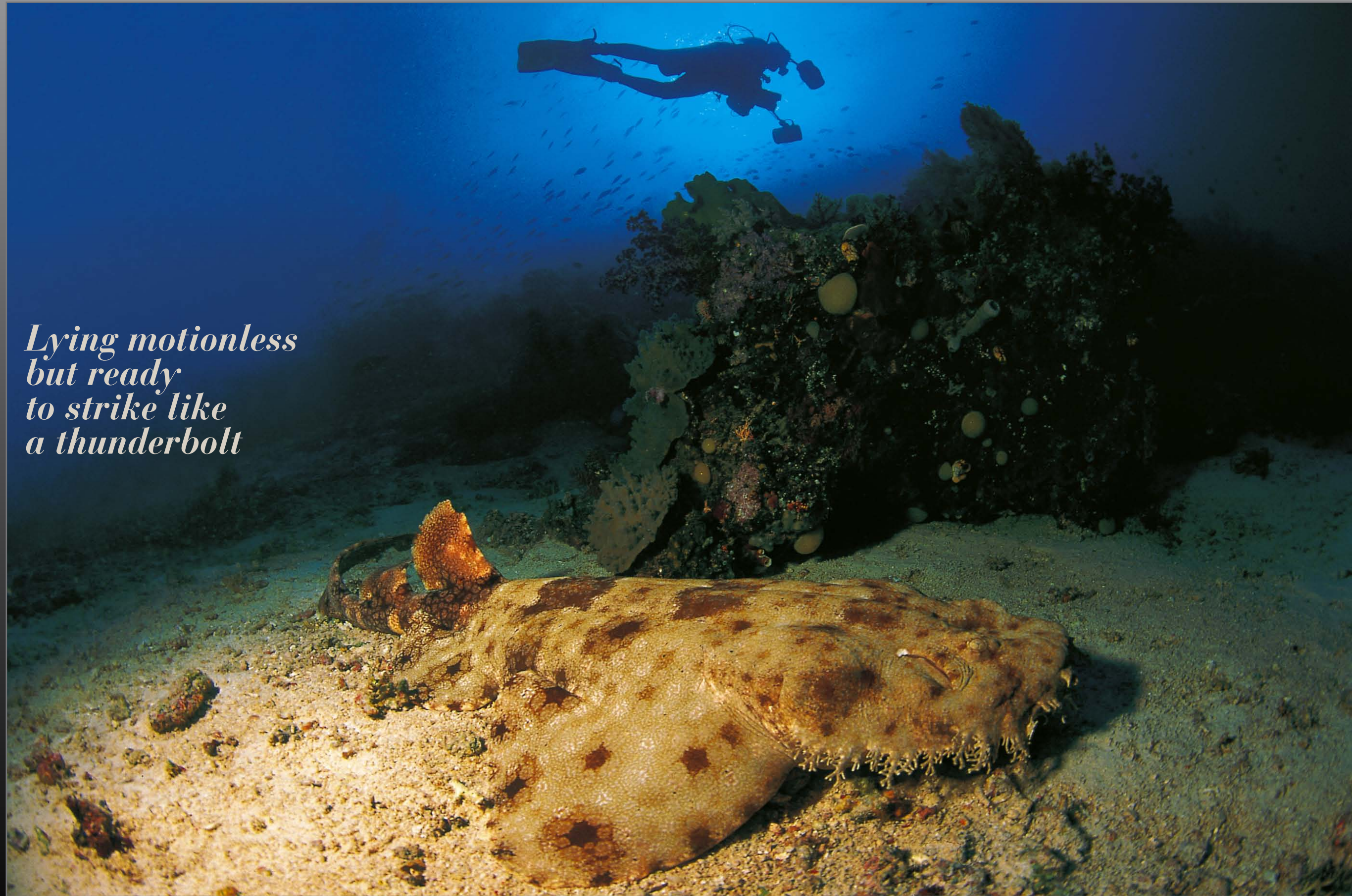
ANIMA MUNDI ON YouTube

WOBBERGONGS OF RAJA AMPAT






*Lying motionless  
but ready  
to strike like  
a thunderbolt*



Swimming against a strong current, Antonella carefully manouvers herself in a good position while Andrea inches his way forward, until the camera's fish-eye dome actually brushes against the Tasselled wobbegong's right pectoral fin. When dealing with Carpet sharks as camera subjects, slow movements and a good understanding of the shark's body language are imperative.



Antonella poses by a good-sized adult Tasselled wobbegong, found under a coral overhang it shares with a school of Golden sweepers. The robust build and flattish, unusual appearance of this species are quite apparent. One has to imagine Sweepers benefit from the presence of the shark in their lair - a good deterrent to other predators even if, presumably, it will occasionally gulp down a few of them.

Wobbegongs are a true wonder of nature to behold as they lie motionless in ambush on large table corals - a far cry from the popular image of the shark as a torpedo-like, steel-grey, sleek predator patrolling the blue void of the open ocean. Their incredibly wide, highly compressed head and mouth profile broken by an array of dermal flaps and tassels, their small, beady and slightly malevolent eyes cleverly hidden in a confusing maze of reticulations, their broad, paddle-like pectoral fins widely spread out and their dark, ribbon-like tail curved at a sharp angle, Tasselled wobbegongs are almost impossible to detect in the layered, highly structured environment of West Papuan coral reefs - despite sitting out in the open and in full sunlight most of the times, as if brashly defying divers and prey alike to find them out. Their apparently peaceful,

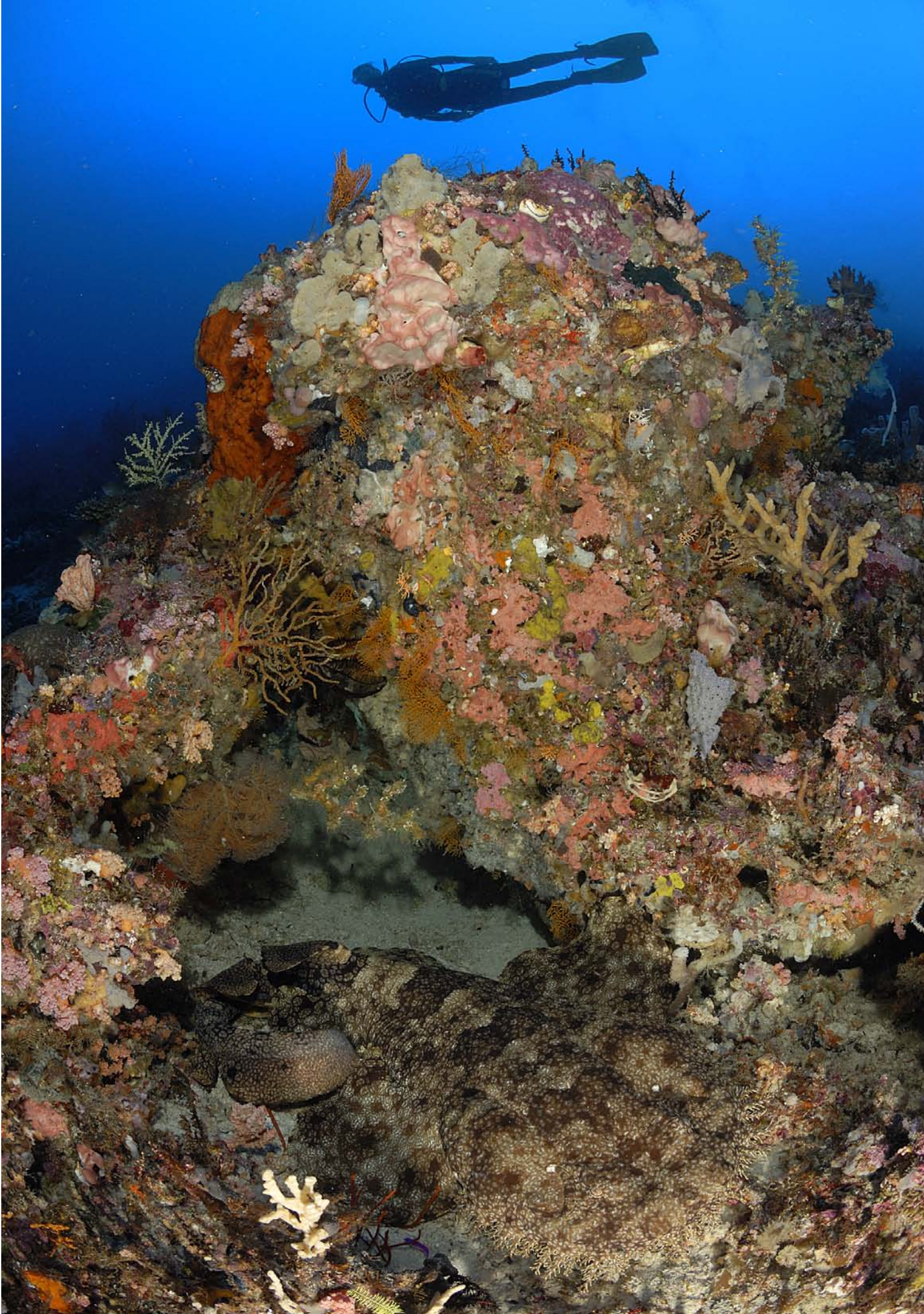
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A macro close-up image of the tassels surrounding the Wobbegong's mouth reveals all the details - their branched appearance and the dermal denticles covering the skin. All sharks are in fact literally covered with teeth. Far left, a Tasselled wobbegong lies in patient ambush among the corals - notice once more its perfect camouflage.

*A splendidly  
camouflaged  
sit-and-wait  
reef predator*





even torpid attitude - as it usually happens in nature - can be mortally deceptive however, as when needed they will also unexpectedly explode into action and strike with lightning speed at fish passing within reach of their cavernous mouth, usually gulping prey down in a matter of seconds. Territorial and sedentary, Carpet sharks make wonderful and obliging subjects - careful divers moving slowly and

cautiously can actually approach them within inches - but one must never forget these are perfectly adapted and highly evolved sit-and-wait ambush predators after all, gifted with an exceptionally big mouth displaying a formidable array of sharp teeth (including a set of frontal snake-like curved fangs to get a better grip on their slippery prey) and a supple, muscular, highly flexible body (Wobbegongs can easily bend over and

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*Tasselled wobbegongs show a marked - if somewhat understated - capability to alter at will the intensity of their coloration. This specimen - lying on white sand - has opted for a much lighter tone of its livery than it would adopt among hard corals.*







*Disruptive patterns to vanish on the sea floor*



A macro close-up of the dorsal dermal denticles and two wide-angle shots of Wobbegongs in their habitat clearly show the amazing degree of camouflage this species can attain. This is a brilliant example of somatolitic (ie shape-breaking or disruptive) pattern and coloration. Notice how the color intensity of the brown patches varies between the two specimens illustrated, clearly depending on the substrate of choice.



Lying flat on a large table coral, a Tasseled wobbegong draws a puzzling, enchanting picture of animal abstraction. Notice how the mouth frills, the broad pectoral fins and the differently patterned and hued tail of the animal efficiently break its shape. This specimen has just "switched off" its bright white "false eye" spots.





Claudia Pellarini/bittenbysharks.com



More extreme close-ups show the fang-like front teeth and the slit-like spiracle opening just behind the eye, which allows breathing when the shark lies still. Notice once again the rough, sharp skin texture - dermal denticles optimize water flow when swimming and form a hard, flexible coat of armor which protects sharks from abrasions and bites.



bite their own tail, so don't pull it): reluctant to move if not unduly disturbed and relying on their spectacular camouflage to avoid detection instead, they are also well known to have inflicted serious bites on waders and snorkellers who stepped on them in coastal waters. Like most ambush predators (one only has to think of several arboreal snakes to remark the striking similarities), Wobbegongs not only have fearsome front fangs, but also show a worrying tendency to hold tight with pitbull-like tenacity once they have bitten, so one has to be very careful in dealing with them as camera subjects. Divers also have to remember, as with most other large fish, never to block their escape route when one is found in a cave or under a coral overhang -

however small, a shark intent on leaving its lair in a hurry will not hesitate to trash violently and strike blindly at anything obstructing its way. Regularly sighted on the colorful, overwhelmingly rich coral reefs of Indonesia's easternmost province, the Tasselled wobbegongs of West Papua are a source of endless wonder and amazement to divers. Stunning examples of the science of camouflage in its most evolved form, superbly adapted at their sun-dappled shallow water habitat, they lie still on flat table corals like some exquisite work of abstract art, the weird and wonderful creation of an underwater inside decorator gone slightly mad: marvelous icons of nature's whimsy and a wildlife photographer's dream. ●