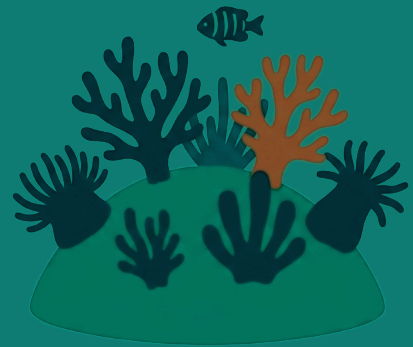


DIVR



FREE GUIDE FROM DIVR

Reading a reef

What to look at on your next dive, what each sign actually means, and how to record it so it counts.



Divers see reefs that **nobody** surveys

Marine survey work is expensive and slow. Ship time, permits, trained staff, a narrow weather window. So most reefs get formally looked at rarely, and the same accessible, already well-studied sites get surveyed again.

Meanwhile recreational divers are in the water constantly, at the awkward and unfunded sites in between, several times a week, already looking closely at exactly the things scientists want counted.

The gap was never willingness. It was knowing what to look at, and having somewhere to put it. This guide is the first half of that.

You do not need training to notice most of what follows. You need to know it is worth noticing.



Four signs of a healthy reef

01

Lots of coral, and intact

Big table and branching corals are the slow growers, some adding only centimetres a year. A reef full of large ones is telling you it has gone a long time without a serious storm, a bleaching event or an anchor.

02

Colour in the current

Soft corals, gorgonians and other filter feeders only open and feed where water is moving and carrying food. A wall fully extended and vivid is a wall with good water flowing over it. The same wall closed and dull is worth noting.

03

Big schools

Dense aggregations are not decoration, they are evidence that everything below them on the food web still works. Plenty of small fish means plenty of the smaller things they eat.

04

Stone covered in life, not algae

Coral and algae compete permanently for space. The hard pink crust of coralline algae is a good sign, and it is what coral larvae prefer to settle on. Fuzzy green or brown turf spreading over dead coral is not.



What a reef in trouble looks like

01

Bleaching

Coral turning stark white, or an unnatural fluorescent pink and blue. The animal has expelled the algae it lives with, usually under heat stress. It is not dead yet, and that is exactly why the timing of the report matters.

02

Algae winning

Turf or fleshy algae spreading across what was recently coral. Usually means too many nutrients, too few grazers, or both.

03

Rubble fields

Broken branching coral lying loose. Storm damage, anchors or destructive fishing. Rubble moves in surge, so it keeps killing new growth.

04

Missing size classes

Plenty of small fish and no large ones is a fishing signature, not a natural state. The big individuals are usually the most reproductively valuable.

05

Silt on everything

A fine layer over the coral suggests runoff or dredging nearby. Coral spends energy clearing sediment that it should spend growing.

06

Lost fishing gear

Nets and line keep catching animals for years after anyone stops using them. Worth recording precisely, because it can be removed.



Small animals that tell you **a lot**

Some species carry more information than their size suggests. These three are worth learning to spot and record.

Nudibranchs

No shell and no scales, so they register changes in water chemistry before anything else reacts. Most eat one specific prey and nothing else, and they live months rather than years. Finding one confirms its prey is still there, and the thing its prey depends on too. Finding none, on a reef where they were common, is a signal in itself.

Sea urchins

Grazers that keep algae off the rock so coral larvae have somewhere to settle. Where grazing fish have been fished down, urchins are doing a large share of that work. Mass urchin die-offs have flipped entire reef systems to algae, so where they are alive and where they are dying is genuinely useful.

Invasive species

Lionfish in the Atlantic and Caribbean are the clearest example. You cannot cull your way out of an invasion, but tracking where the front is moving, which reefs are newly affected and at what depths tells managers where effort is worth spending.



How to record it so it actually counts

Three properties separate a record that changes a decision from one that does not. Volunteer effort usually fails on these rather than on effort or honesty.

01 **Standardised**

Everyone records the same fields the same way, so records can be compared instead of merely collected. A fixed coral scale beats "reef looked alright" because it can be tracked over time.

02 **Validated**

Identifications get checked rather than taken on trust. This is why the photograph matters as much as the sighting.

03 **Traceable**

Each record carries who, when, where exactly and how, so it can be audited years later. Scientists do not then have to trust it. They can filter it, weight it and verify it.

Miss any one of those and the observation is still true, it is just unusable. That is what happens to most volunteer effort: thousands of genuine sightings nobody can defend in a decision.

So on your next dive: the site with real coordinates, the date, the depth, the species with a proper name, a coral rating, and a photograph good enough that somebody could check you.

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NOW GO LOG SOMETHING

You are already looking. Write it down.

DIVR is a free dive log with citizen science built in. Log a dive in under 30 seconds, tag the species you saw from a catalogue of 4,400+, rate coral health, and find dive sites near you. Every log becomes a structured marine observation that researchers can actually use.

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