PURSUIT OF ZΩH — THE WEEKLY

This Week in Marine Biology

NO. 007 • 15 NOVEMBER 2026 • NEWS OF 8 NOV – 15 NOV 2026 • 4 STORIES

THIS WEEK

Reefs reshuffled, and a kelp that clones when alone

Repeat bleaching remakes the Great Barrier Reef's coral mix, a kelp turns to cloning only when mates are absent, sea pigs host a pared-down skin microbe, and twilight-zone fish and shrimp show thin gene pools.

IN THIS ISSUE

01 CORAL REEFS
Five bleachings in eight years have reshuffled the Great Barrier Reef

02 SEAWEED REPRODUCTION
A kelp clones itself mainly when no mate is near

03 DEEP-SEA SYMBIOSIS
Sea pigs carry a stripped-down microbe beneath their skin

04 TWILIGHT ZONE
Gene pools of twilight-zone fish and shrimp run below safe sizes

01

CORAL REEFS

Five bleachings in eight years have reshuffled the Great Barrier Reef

The Great Barrier Reef went through five mass bleaching events in the 8 years from 2016 to 2024.[1] A team from James Cook University compared bleaching and mortality surveys from 2016 and 2024.[1] Far northern reefs, hit 3-4 times since 2016, had not recovered and bleached and died less in 2024, a pattern the authors read as strong selection.[1] Central and northern reefs, given 7-8 years to recover, filled up with fast-growing, heat-sensitive branching and tabular Acropora, then declined as much as intact southern reefs that faced up to twice the heat stress.[1]

WHY IT MATTERS

A reef's bleaching history and species mix now shape how it responds to the next heatwave, and quick recovery can favor the corals most easily damaged.[1]

CAVEAT *The comparison rests on surveys in two years, and selection is the authors' interpretation of the pattern rather than a direct measurement.*[1]

[1] doi:10.1016/j.cub.2026.10.038

5

mass bleaching events on the Great Barrier Reef in the 8 years from 2016 to 2024

SOURCE 1

ON THE ROAD?

Listen to this issue

6-minute episode, read aloud: the same four stories, written for the ear. Stream it, or download the MP3, from the Marine Biology page.

pursuit-of-zoe.com/pages/marine-biology#zoh-weekly

02

SEAWEED REPRODUCTION

A kelp clones itself mainly when no mate is near

Kelps alternate between large sporophytes and microscopic gametophytes that make eggs or sperm.[2] Unfertilized eggs can grow into sporophytes on their own, and a Max Planck Institute for Biology Tübingen team found that male gametophytes of Laminaria pallida, a kelp of South Africa and Namibia, can as well.[2] These parthenosporophytes were misshapen, smaller and endoreduplicated.[2] Wild populations showed no sign of cloning, yet 92% of mature gametophytes raised from them made parthenosporophytes in culture.[2] With a mate across a 5 µm mesh, asexual development was less frequent.[2]

WHY IT MATTERS

Sex stays the default when partners are available, with asexual growth held in reserve, which the authors note is relevant to restoring and farming kelp forests.[2]

CAVEAT *Laboratory cultures; the mate-detection signal is not yet identified, and the authors cannot fully exclude that some sperm passed the mesh.*[2]

[2] doi:10.1371/journal.pbio.3004065

92%

of mature gametophytes from wild kelp that produced asexual sporophytes in the lab

SOURCE 2

03

DEEP-SEA SYMBIOSIS

Sea pigs carry a stripped-down microbe beneath their skin

Sea pigs are deep-sea sea cucumbers of the genus Scotoplanes.[3] In specimens from the Northwest Pacific, a team from the University of Tokyo and JAMSTEC found a dominant bacterium living beneath the cuticle and named it Candidatus Abyssoplasma scotoplanesicola, a new genus in the Mycoplasmatota.[3] Its complete circular genome is 649 kb and lacks central pathways, glycolysis among them.[3] Acidic cell-surface proteins, some over 5000 amino acids long, make up 27.6% of it.[3] The microbe accounted for 76.4%–98.9% of the body-wall microbiome and formed clumps on the epidermal side.[3]

WHY IT MATTERS

Such subcuticular bacteria often dominate echinoderm body walls but are little studied, and genome plasticity near the surface-protein genes hints at how they diversify where they meet the host.[3]

CAVEAT *The study describes genomes and location; what the bacterium does for its host was not tested.*[3]

[3] doi:10.1093/ismehm/aazag018

649 kb

complete circular genome of the sea pig body-wall symbiont

SOURCE 3

04

TWILIGHT ZONE

Gene pools of twilight-zone fish and shrimp run below safe sizes

The conservation status of the mesopelagic zone, 200-1000 m down, is poorly understood.[4] A team led from Florida International University analyzed genome-wide data from three lanternfishes and two sergestid shrimps sampled in the Gulf of Mexico from 2011 to 2023, with 486 individuals in the final dataset.[4] All five species had effective population sizes below 500, the long-term viability threshold, with some estimates near or below 50.[4] Diaphus dumerilii showed a net genomic diversity loss of ~8%, and niche models project suitable Gulf habitat to change by −70% to −5.2% for four species.[4]

WHY IT MATTERS

The results challenge the idea of the deep as a stable refuge and raise the possibility of a broader, unnoticed crisis in the mesopelagic.[4]

CAVEAT *Five species in one region; estimates vary by method, and the universal use of the 50 and 500 thresholds is still debated.*[4]

[4] doi:10.1038/s41467-026-79098-0

~8%

net loss of genomic diversity in the lanternfish Diaphus dumerilii, 2011 to 2023

SOURCE 4

WORDS THIS WEEK

Mass bleaching
Widespread loss of the symbiotic algae that give corals color and much of their food, usually triggered by a marine heatwave; bleached corals may recover or die.

Effective population size
The size of an idealized population that would lose genetic diversity at the same rate as the real one; usually far smaller than the head count.

Gametophyte
In kelp, the microscopic life stage that makes eggs or sperm. A fertilized egg grows into the large sporophyte we recognize as kelp.

Mesopelagic zone
The dim twilight layer of the ocean between about 200 and 1,000 meters, home to vast numbers of lanternfishes, shrimps and squids.

Parthenogenesis
Development of offspring from a gamete that was never fertilized, a form of asexual reproduction.

SOURCES

1. PAPER M. McWilliam et al., “Rapid change in coral composition alters the footprint of mass bleaching,” Current Biology (9 Nov 2026). doi:10.1016/j.cub.2026.10.038
2. PAPER D. Liesner et al., “Life-cycle plasticity enables conditional asexual reproduction in a kelp,” PLOS Biology (12 Nov 2026). doi:10.1371/journal.pbio.3004065
3. PAPER Y. Yoshida et al., “Genomic, spatial, and evolutionary insights into a dominant Mycoplasmatota symbiont colonizing the body wall of deep-sea holothurians,” ISME Host Microbe (11 Nov 2026). doi:10.1093/ismehm/aazag018
4. PAPER P. A. Peres et al., “Extinction risks in deep-sea populations revealed by genomic data and ecological niche modeling,” Nature Communications (12 Nov 2026). doi:10.1038/s41467-026-79098-0

How this is made. Each story comes from the past seven days of journal, agency and society releases and is written fresh for curious minds, with a source for every claim. Superscripts refer to the list above. Spotted an error? Tell us through the contact page; corrections run in the next issue.

Choose what we feature next. Signed-in customers vote every other week at pursuit-of-zoe.com/pages/vote.