PURSUIT OF ZΩH — THE WEEKLY

This Week in Zoology

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THIS WEEK

Colonies that improve with age, elephants adrift

Harvester ant colonies grow less likely to die as they age, Sri Lanka's elephants splinter into smaller groups, a lethal gene follows reintroduced lynx, bacteria favor parrots' brightest feathers, and mudskippers use their tails on soupy mud.

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01

AGING & SOCIAL INSECTS

Ant colonies that get sturdier with age

Most vertebrates and insects age the familiar way: the older they are, the likelier they are to die and the less they breed.[1] Tracking 3,285 western harvester ant (Pogonomyrmex occidentalis) colonies of known age for 34 years in Colorado, Blaine Cole and Diane Wiernasz of the University of Houston found the reverse, called negative senescence.[1,2] Colonies keep growing, and growth and reproduction rose together instead of trading off.[1] Workers live about a year and are steadily replaced, while a queen can live for decades.[2]

> WHY IT MATTERS
>
> *It shows how a replaceable workforce can let a colony escape the usual decline, a pattern also seen in some plants, fish and sea urchins.*[1,2]

CAVEAT *This is aging at the colony level; individual ants do not become biologically younger.*[2]

[1] doi:10.1073/pnas.2612817123 · [2] phys.org

3,285

harvester ant colonies of known age followed in a 34-year field study

SOURCE 1

ON THE ROAD?

Listen to this issue

7-minute episode, read aloud: the same five stories, written for the ear. Stream it, or download the MP3, from the Zoology page.

pursuit-of-zoe.com/pages/zoology#zoh-weekly

02

ANIMAL SOCIETIES

Sri Lanka's female elephants split into smaller, lonelier groups

A UC San Diego team led by Anastasia Madsen and Shermin de Silva followed 443 wild female Asian elephants in Sri Lanka's Udawalawe National Park for 12 years, recording who spent time with whom.[3,4] As members died or left and few newcomers arrived, turnover built up gradually; then the network broke into smaller, more isolated communities.[3,4] Links changed not only because members disappeared but because the remaining elephants rearranged their relationships with one another.[3] The authors read this as a lasting change of state.[3]

443

wild female Asian elephants whose social ties were tracked for 12 years

SOURCE 3

WHY IT MATTERS

Elephants rely on companions to forage, share information and raise young, and the researchers warn the new structure may not be easy to repair.[4]

CAVEAT *One population in one park; the release lists likely deaths, permanent emigration and fewer arrivals as drivers, without singling out one cause.*[4]

[3] doi:10.1126/science.aef6714 · [4] phys.org

03

CONSERVATION GENETICS

A hidden lethal gene rode along with Switzerland's lynx

Reintroductions help endangered species but often leave small, isolated populations that become inbred.[5] Combining long-term health and population records with genome analysis, Janna Niehaus and colleagues identified a recessive loss-of-function allele that causes lethal mineralization of the organs in young Eurasian lynx (Lynx lynx) from a reintroduced population in Switzerland.[5] Mapping the allele across space and time, they traced it to one of the source populations used for the releases; founder effects and inbreeding then raised its frequency.[5]

MECHANISM

Founders come from a bottlenecked source

↓

Some carry a hidden recessive allele

↓

Founder effects and inbreeding raise it

↓

Two copies cause lethal organ mineralization

WHY IT MATTERS

The authors report the first direct link between a reintroduction's history and a lethal genetic disease in the wild, and stress how vulnerable small, isolated populations are after release.[5]

CAVEAT *The authors say no causal variant for a lethal disease had been identified in a wild population before.*[5]

[5] doi:10.1038/s41559-026-03204-0

04

COLOR & FEATHERS

Parrots' brightest feathers are the easiest for bacteria to eat

Melanin is known to protect black feathers from wear and from bacteria that digest keratin.[6] Parrots make many of their colors with psittacofulvins, pigments found in no other animals, and a 2010 study suggested these also fend off bacteria.[6,7] A Princeton team led by Jarome Ali and Mary Caswell Stoddard exposed parrot feathers of many colors to Bacillus licheniformis, a bacterium common on wild birds.[6,7] Red, yellow, orange and green feathers, which carry psittacofulvins, broke down more than black, blue, gray and white ones; black held up best.[6,7]

MECHANISM

Feathers bathed in keratin-eating bacteria

↓

Feeding bacteria release small proteins

↓

Protein in the liquid tracks breakdown

↓

Psittacofulvin colors degrade the most

WHY IT MATTERS

Vivid color appears to come with a cost, and the authors suggest the pressures favoring bright plumage outweigh the extra vulnerability.[6,7]

CAVEAT *A laboratory test with one bacterial species; whether bacteria seriously harm feathers in the wild is still an open question.*[7]

[6] doi:10.1242/jeb.252685 · [7] phys.org

05

BIOMECHANICS

On soupy mud, mudskippers call in the tail

Mud at the water's edge can hold like a solid or flow like a liquid, depending on how wet it is.[8] Divya Ramesh and colleagues studied mudskippers crossing clay mud of controlled wetness.[8] As the mud got wetter its strength fell 25-fold, so the fish sank deeper and touched more mud; stickiness peaked at intermediate wetness, and dry mud clung to fins as their mucus dried.[8] The fish kept their usual crutching gait on all but the wettest mud, with a modest loss of performance, and added tail thrusts, or even jumps, when crutching faltered.[8]

WHY IT MATTERS

The crutching program looks well matched to native mud but inflexible, with most of the improvising done by the tail.[8]

CAVEAT *Laboratory clay mud at set wetness levels, not a natural mudflat.*[8]

[8] doi:10.1242/jeb.252123

25-fold

decrease in clay mud strength as it became wetter, across the range tested

SOURCE 8

WORDS THIS WEEK

Negative senescence
A pattern in which the risk of dying falls, or reproduction rises, as an organism or colony gets older: the reverse of ordinary aging.

Psittacofulvins
Red, orange and yellow pigments made only by parrots; other birds usually get similar colors from carotenoids.

Founder effect
When a new population starts from a few individuals, any rare gene variant they happen to carry can become far more common than in the source.

Crutching
The mudskipper's walk on land: it plants both pectoral fins and vaults its body forward over them, a little like a person on crutches.

Recessive allele
A gene variant that shows its effect only when an animal inherits two copies, one from each parent; carriers with one copy look healthy.

Yield strength
The stress at which a material such as wet mud stops holding its shape like a solid and starts to flow.

SOURCES

1. PAPER B. J. Cole & D. C. Wiernasz, "A replaceable soma enables negative senescence in harvester ants," Proceedings of the National Academy of Sciences (9 Nov 2026). doi:10.1073/pnas.2612817123
2. NEWS "Ant colonies defy aging patterns as death risk falls and reproduction rises," Phys.org, from a University of Houston release (12 Nov 2026). https://phys.org/news/2026-11-ant-colonies-defy-aging-patterns.html
3. PAPER A. E. Madsen et al., "Increased demographic turnover and isolation precede social fragmentation in Asian elephants," Science (12 Nov 2026). doi:10.1126/science.aef6714
4. NEWS M. Aguilera, "Elephants found to be increasingly isolated, leading to fractured social networks," Phys.org, from a UC San Diego release (12 Nov 2026). https://phys.org/news/2026-11-elephants-isolated-fractured-social-networks.html
5. PAPER J. Niehaus et al., "Lynx reintroduction from a bottlenecked source exposes a lethal genetic defect," Nature Ecology & Evolution (13 Nov 2026). doi:10.1038/s41559-026-03204-0
6. PAPER J. R. Ali et al., "Colourful psittacofulvin-containing parrot feathers do not resist bacterial degradation," Journal of Experimental Biology (12 Nov 2026). doi:10.1242/jeb.252685
7. NEWS "Parrots' vibrant feathers are surprisingly susceptible to bacterial attack," Phys.org, from a Princeton University release (12 Nov 2026). https://phys.org/news/2026-11-parrots-vibrant-feathers-susceptible-bacterial.html
8. PAPER D. Ramesh et al., "Mudskippers use tail thrusting to help crutching to move on mud of various wetness," Journal of Experimental Biology (13 Nov 2026). doi:10.1242/jeb.252123

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.

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