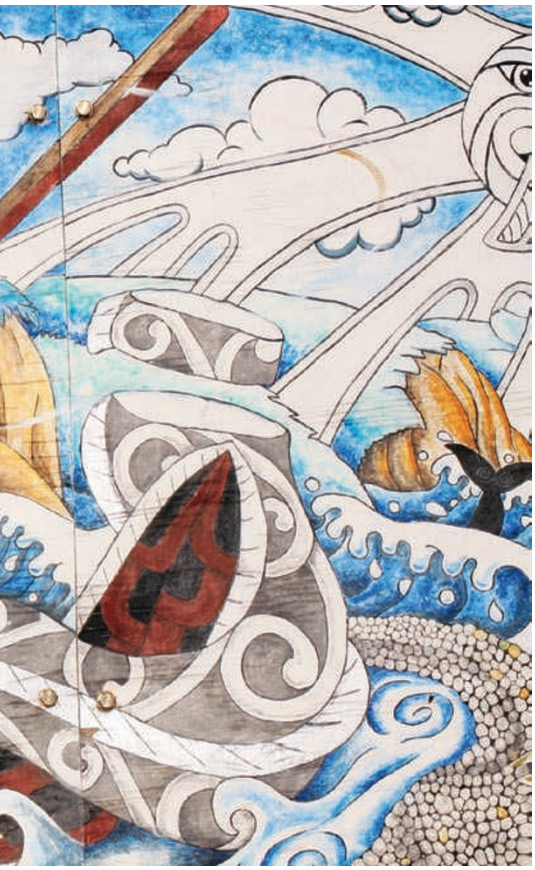

and suggested alternative larval migration routes for European eels other than the North Atlantic drift current. Prosek's book stops short of capturing these emerging results.

For American and European eels, monitoring the late stages of their life cycle in the Atlantic is the greatest challenge. Only by assessing survival rates can we focus remedial action on the most important life stages. The difficulty of tracking small animals over vast distances is immense — attached telemetry devices that measure and transmit data are currently the only feasible method of following adult eels across the ocean. The miniaturization of transmitters in the coming years should advance knowledge considerably. More information on tropical eel species is also needed, as we know even less about them — a new species was even discovered recently in the Philippines (*Anguilla luzonensis*) — and different factors will affect their survival.

Eels is a solid introduction to global *Anguilla* species. It provides a convincing argument that eels should be preserved because of their unique life cycle, and their economic and cultural importance. To restore and manage eel populations worldwide, we need a deeper understanding of their life history. ■

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CONSERVATION

Biodiversity as a bonus prize

Rare species and ecosystem services make uneasy bedfellows, discovers **Emma Marris**.

As biologist Ken Thompson explains in *Do We Need Pandas?*, conserving rare species does not really benefit people. If you care about nature because of its usefulness to humanity, pandas are a luxury item — and so are most other rare species. The money that is spent on saving them could be better applied by protecting ecosystems that provide us with food, timber, clean water, a liveable climate and flood protection.

If one's aim is to prevent extinctions, as in much of traditional conservation, then identifying and fussing over endangered species is the best way forward. If one sees the environment as a source of services, as Thompson does, the more sensible course is to "conserve the fabric of whole ecosystems, and let the rare species look after themselves".

The reason, he explains, is partly because rare species are too sparse to significantly influence the functioning of an ecosystem. They are thus unlikely to be essential for the continued provision of ecosystem services.

> ***"We should focus on saving whole ecosystems that are useful for humanity."***

Thompson traces conservation scientists' failed attempts to prove that biodiversity is inherently good for ecosystems. First, the results of these experiments — typically using small plots containing manipulated numbers of plants — were not what they were cracked up to be. Yes, more-diverse ecosystems were more productive on average. But this was not a result of their variety alone — it was because they were also more likely to include the most productive plant, monocultures of which could be even more productive. Second, experimenters defined productivity in terms of turning sunlight into biomass. Yet growth need not tally with value: in lakes, high productivity often means more algae and fewer fish.

Thompson proposes that we give up the goal of maximizing biodiversity. Instead, we should focus on saving whole ecosystems that are useful for humanity. In the process of conserving such areas, biodiversity will be protected anyway, as a sort of bonus prize.

Do We Need Pandas? The Uncomfortable Truth About Biodiversity
KEN THOMPSON
Green Books: 2010. 160 pp. £9.95

But by putting the focus only on what nature can do for us, Thompson leaves open the possibility that ecosystems that do not deliver sufficient services might be thrown out, with all the biodiversity that they contain. He admits that society has benefited from the turning over of forests and wetlands to agriculture: "It is only because of such conversion that you and I have enough to eat." But he does not support conversion of any of the remaining wild habitat. Others disagree: some economists might argue that a particular wild patch would provide better services to humanity as pasture or plantation. This is the peril of the ecosystem-services model. Hitch your wagon to it, and when conversion provides better services than protection, your biodiversity bonus is cancelled.

Despite his book's provocative title, Thompson does not claim that we don't need pandas. Like most ecosystem services enthusiasts, he is keen to have his economic pragmatism and his emotional love of nature too. Letting the panda go extinct would be "a profound failure for our stewardship of the natural world", he feels. But he cannot have it both ways. If the ecosystems in which pandas live do not provide economically valuable services to humanity, then it is goodbye panda. ■

NATURE.COM
For a review on protecting the panda, see:
go.nature.com/3dk65d

Emma Marris *writes for* Nature *from Columbia, Missouri.*