

1 A New Animal Species Emerging in North America

2 Like some people who might rather not admit it, wolves faced with a **scarcity** of potential sexual partners
3 are not beneath lowering their standards. It was desperation of this sort, biologists reckon, that led
4 dwindling wolf populations in southern Ontario to begin, a century or two ago, **breeding** widely with
5 dogs and coyotes. The clearance of forests for farming, together with the **deliberate** persecution which
6 wolves often suffer at the hand of man, had made life **tough** for the species. That same forest clearance,
7 though, both **permitted** coyotes to spread from their prairie homeland into areas hitherto **exclusively**
8 lupine, and brought the dogs that **accompanied** the farmers into the mix.

9 Interbreeding between animal species usually leads to **offspring** less **vigorous** than either parent – if they
10 survive at all. But the combination of wolf, coyote and dog DNA that **resulted** from this reproductive
11 necessity **generated** an **exception**. The **consequence** has been booming numbers of an **extraordinarily**
12 fit new animal spreading through the eastern part of North America. Some call this creature the eastern
13 coyote. Others, though, have dubbed it the “coywolf”. Whatever name it goes by, it now numbers in the
14 millions. The DNA from both wolves and dogs brings big advantages, says Dr Kays. At 25kg or more,
15 many coywolves have twice the heft of purebred coyotes. With larger jaws, more muscle and faster legs,
16 individual coywolves can take down small deer. A pack of them can even kill a moose.

17 Coyotes dislike hunting in forests. Wolves prefer it. Interbreeding has produced an animal skilled at
18 catching prey in both open terrain and **densely** wooded areas, says Dr Kays. This has **led to** an
19 **astonishing** expansion in territory. Purebred coyotes never managed to **establish** themselves east of the
20 prairies. Wolves were **killed off** in eastern forests long ago. But by combining their DNA, the two have
21 given rise to an animal that is able to **spread** into a **vast** and **otherwise uninhabitable** territory. Indeed,
22 coywolves are now living even in large cities, like Boston, Washington and New York, as their
23 inhabitants can now hear, even if they will **rarely** see the animal, because its cry blends those of its
24 ancestors. The first part of a howl resembles a wolf’s (with a deep pitch), but this then turns into a higher-
25 pitched, coyote-like yipping.

26 Whether the coywolf actually has evolved into a **distinct** species is debated. Jonathan Way, who works in
27 Massachusetts for the National Park Service, **claims** in a forthcoming paper that it has. He thinks its
28 morphological and genetic divergence from its **ancestors** is sufficient to qualify. But many disagree.
29 One common definition of a species is a population that will not interbreed with outsiders. Since
30 coywolves continue to **mate** with dogs and wolves, the argument goes, they are therefore not a species.
31 But, given the way coywolves came into existence, that definition would mean wolves and coyotes should
32 not be **considered** different species either –and that does not even begin to **address** whether domestic
33 dogs are a species, or just an aberrant form of wolf.

34 In reality, “species” is a concept **invented** by human beings. And, as this **argument** shows, that concept
35 is not clear-cut. What the **example** of the coywolf does **demonstrate**, though, is that evolution is not the
36 simple process of one species **branching** into many that the textbooks might have you believe. Indeed,
37 recent genetic **research** has discovered that even *Homo sapiens* is partly a product of hybridisation.
38 Modern Europeans carry Neanderthal genes, and modern East Asians the genes of a newly **recognised**
39 type of early man called the Denisovans. Exactly how this happened is unclear. But maybe, as with the
40 wolves of southern Ontario, it was the only way that some of the early settlers of those areas could get
41 a date.

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