

How Baby Owls Sleep (Awww!) Affects What They Look Like

By Paige Towers • July 1, 2016 at 2:30pm

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Cats, sloths and Kardashians be gone. Baby owls

— also known as owlets (awww!) — are breaking the internet. We're not surprised: It's as though they were created for meme-able cuteness: they're pocket-sized predators with little moon faces, cartoonishly large eyes and fluffy downy feathers. In fact, they're so irresistible that they don't even have to do anything in order to score views on YouTube; this video,

which has nearly half a million views, is literally just four baby screech owls blinking and staring at a camera.

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Try watching this video on www.youtube.com, or enable JavaScript if it is disabled in your browser.

But besides the fact that they're A) adorable and B) so wide-eyed that they look hopped up on a venti latte at all times, what

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do we know about these little hooters? Well, for one how they sleep has a big effect on what they'll look like as fullgrown adults.

Owlets that had less REM sleep were more likely to develop dark feather spots.

A few years ago, the internet was abuzz (well, okay, not , but you get me) with the results of published in that investigated the slumber of owlets. The study showed that baby barn owls and baby humans spent a very similar amount of time in REM sleep — that

vital for brain development. They also found that — just like humans — as owlets get older, the amount of time their brains spend in REM sleep decreases. Equally interesting, but somewhat overlooked at the time, was the discovery that owls' physical and behavioral characteristics seemed to be directly linked to how they slept as an wee owlet.

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Researchers at the in Germany and the in Switzerland monitored the brain waves and movement of 66 barn owl babies using EEG sensors. These sensors were attached to the owlets' heads (awww!) for five days and brought in a wealth of information that the researchers were able to use to compare bird sleep to mammal sleep, as well as to use later to observe how sleep patterns affected the owlets as they got older. (Also, as noted in the study, no owlets were harmed in the making of this study.)

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Phew.

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The researchers confirmed that the owlets' REM sleep mimicked the pattern of mammal sleep, but they also discovered something a little more unexpected: the expression of a gene called PCSK2

that is involved in creating the dark spots in an owl's feather follicles was dependent on how much time they spent in REM sleep. That means owlets that had less REM sleep were more likely to develop dark feather spots.

Researchers aren't sure what the link between REM sleep and feather appearance. But their findings suggest that the brains of the owlets who grew up to have darker spots developed differently than the brains of those who were expressing lower levels of this gene.

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So why is this important? Well, in the Animal Kingdom, outward appearances can spell the difference between success and failure. When it comes to owls, the association

between different behaviors and different feather colorations/markings has been noted for years — spot size, color and patterns all influence their reproductive habits and general behavior. Male barn owls with smaller spots, for example, score more with the lady owls than those with large spots.

The reason for the REMfueled plumage pigmentation differences is unclear but after more research scientists will have a better idea of the role it plays in owls — and birds in general. In the meantime, we can still squeal gleefully while watching videos of the tiny, bigeyed birds.

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