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This Week

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Letters

Earlybirds

"Chinese bird fossil: Mix of old and new" (SN: 10/20/90, p.246) makes a mountain of a molehill. These roughly 135-million-year-old remains from the Lower Cretaceous of China are but a few million years older, if at all, than *Ambiortus* from the Lower Cretaceous of Mongolia. The ages of both can be questioned, but they are as little as 5 to 8 million years apart, and possibly coeval through their geologic ranges.

Ambiortus was described by Kurochkin in 1982, and I studied the specimen in Moscow. It was a powered flier with a keeled sternum and the flight apparatus of a modern bird. The carpometacarpus was fused, but it had a third clawed phalanx on the major digit of the wing; modern birds typically have only two phalanges.

You quote paleontologist Paul C. Sereno as stating that the Chinese bird "is the first bird with the capacity for a modern flight stroke." Yes, but the genus may have flown in the same trees with *Ambiortus.*

You further state, "Many paleontologists believe *Archaeopteryx* could not fly well, and they envision the creature flapping its wings while jumping after insects."

These "many" should study the wing of *Archaeopteryx.* It is, in profile, the typical elliptical wing of a modern woodland bird, exhibiting feathers unchanged even in microscopic detail during 140 million years. The flight feathers of *Archaeopteryx* have asymmetric vanes, curvature and a longitudinal furrow along the ventral side — all uniquely characteristic of modern flying birds.

Organisms' behavioral capabilities are usually orders of magnitude greater than can be demonstrated by simple biomechanical analyses. The good is oft *not* interred with their bones. When one considers the ellipitical wing and feather characters outlined above, there are four derived flight features shared only by *Archaeopteryx* and modern flying birds. These render the earliest bird arboreal, certainly not a terrestrial fly-swatter.

Archaeopteryx flew!

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Keeping a cool head

"The Great Brain Drain" (SN: 10/13/90, p.232) is an excellent overview of Dean Falk's theory and the underlying physiological and anthropological mechanisms of brain-temperature regulation.

Finding an article in the same issue on the effects of clonidine on menopausal hot flashes ("Flushing out the mechanisms of hot flashes," p.229) is an amazing coincidence. Clonidine is efficiently used to cure rosacea, a common vascular dermatosis of the face. In such pa-

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