

in the first place? "Most evolution is common sense, but this bird is bizarre," Strahl says. "It's some kind of abnormal creature that has developed a lot of life history traits that are extremely different from any other bird. . . . Alejandro and I are both pretty creative, but we never came up with a good explanation [for the foregut]."

In an effort to understand how the hoatzin's digestive system influences its lifestyle, Strahl and his co-workers are now comparing the tropical bird with a relative, the guira cuckoo, which munches leaves only part-time and lacks a foregut. "Leaf-eating did not happen overnight," Strahl told *SCIENCE NEWS*, adding that some fossil evidence indicates the hoatzin may have originated in the Eocene epoch, predating mammal foregut fermenters.

**S**trahl's own history with hoatzins began in the 1960s. Living near the Bronx Zoo and next door to the zoo's director, he had plenty of opportunities to ponder strange animals. As a boy, Strahl read the works of bathysphere inventor William Beebe, who served as the zoo's first curator of birds and who studied the hoatzin in South America during the early years of the century.

By the time Strahl entered graduate school in the late 1970s, he was hooked on birds. He turned to Beebe's 1918 book, *Jungle Peace*, for help in finding a thesis topic. "The flight of the hoatzin resembles that of an overfed hen," Beebe wrote. "The hoatzin's voice is no more melodious than the cry of a peacock and less sonorous than an alligator's roar. . . . Still, zoologically considered, the hoatzin is probably the most remarkable and interesting bird living on the Earth today."

Inspired by these words, Strahl set out for the hoatzin's South American habitats in 1981 to conduct his thesis research. A study site in Peru would require an arduous canoe trip, he discovered, and though areas of Ecuador and Guyana looked promising, their political climates did not. So Strahl began work at a small research station 150 miles south of Caracas, Venezuela, a region crisscrossed by 2,500 acres of lush forest and twisting rivers — prime nesting areas for hoatzins. Considering the bird's bovine smell, it seems fitting that Strahl's study site lies in the heart of a cattle ranch.

To study the creature further and to educate the public about a bird the Guyanese call "the stinking pheasant," Strahl and Grajal plan to transport 11 hoatzins to the Bronx Zoo this winter for captive breeding. More than 60 years ago, Beebe failed in a similar attempt, but Strahl believes researchers of that era were less familiar with the bird's highly restricted diet. Bringing this storybook-like bird to Beebe's own zoo, Strahl says, "is a dream I've had since 1981." □

*Letters continued from p.259*

Perhaps the longevity study should be based on positions with even distribution of handedness.

The baseball statistics indicate the player's throwing and batting handedness, or his natural handedness. Some young players adopt their older siblings' handedness along with their fielding gloves. A youngster who aspires to play shortstop, third base or catcher will learn to field right-handed.

Batting handedness has an even weaker correlation to natural handedness. Switch hitters are made, not born! Some players choose to bat left-handed because they are two steps closer to first. Now, if we were to study the beer ads to see which hand . . .

*Philip J. Levinson  
Left-hander  
St. Clair, Mo.*

**Headaches and zigzags**

I hope researchers have noted the striking left-right asymmetry in the artistic renderings displayed in "Images of Pain" (SN: 8/26/89, p.136). All the imagery for pain and disintegration travels down one side of the head but not the other. Even Sandra Turner's work, the most apparently symmetric, shows striking asymmetry in the neckline of the sufferer's garment as well as in the size of the two skull hemispheres in the



*Sandra A. Turner*

pain ideation above her head.

*R. Blu  
San Francisco, Calif*

I very rarely have headaches, but I have had the "apparition of sparkling zigzag bits of light," which you describe as common among migraine sufferers. Perhaps my observations will be of interest to researchers.

The phenomenon occurs maybe six times a year at irregular intervals, with no concurrent discomfort. I have never had one together with a headache. It seems to occur mostly after I have looked into a bright light or a brightly illuminated surface. The first occurred when I was a little over 50 years old.

The apparition begins with a bright zigzag figure of small size in the central area of the visual field. The zigzag then gradually increases in size in all directions, eventually coming close to the outer edge of the field of vision. Finally, it seems to disappear beyond that edge. The total duration is about 15 minutes. During that time, I can continue to read, but I must at times move my head or eyes to see better into spots where the bright zigzag interferes with vision. The apparition persists if I close one or both eyes.

I mentioned it once to my optometrist (I wear glasses for moderate nearsightedness, with slight astigmatism), and he felt, as I do, that it has to do with the brain rather than the eyes.

*Walter H. Oettinger  
South Royalton, Vt.*

Your Aug. 26 cover gave me a headache!

*Mrs. C. Sneller  
Carlsbad, Calif.*

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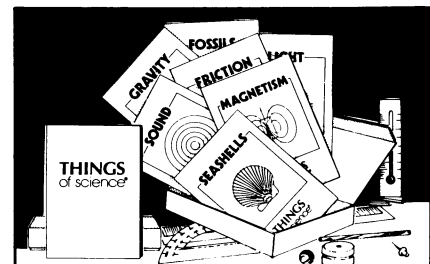
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