Letters

Pseudo Skua?

For many bird watchers the class Aves may usefully be divided into two superorders, trash and nontrash birds. The South Polar skua is most assuredly a nontrasher, so most bird watchers can easily recite time, place, and weather for most, if not all of their sightings of this wonderful bird. We have observed South Polar skuas in the Pacific and Atlantic oceans, the Northern and Southern hemispheres, and in reasonable profusion in their home port of Tierra del Fuego. Never have we seen a skua resemble even remotely the bird shown on page 243 of your 20 July issue (News & Comment). The all-white breast and massive bill are completely wrong for any skua. What, then, is this bird? Assuming that the photo was taken in the vicinity of skua breeding grounds, we offer the suggestion that this bird is the kelp, or southern black-backed gull, *Larus dominicanus*.

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Response: The bird in the photo is a South Polar skua (*Catharacta maccormicki*). Resolution of the alleged discrepancy between the photo and the photo caption, however, is not as simple a task as it would at first appear. The photo is of a morph that relatively few bird watchers have seen, although this form of the skua is abundant. The photo was taken at Cape Crozier, Ross Island (77°S, 178°E), during late January, the place and the date both being important. In high-latitude populations of this species, that is, those populations of "continental" Antarctica, which is cold and dry, light-phase birds, such as the one pictured, make up about 50% of the population [58% at Ross Island (*1, 2*)]. Dark-phase birds make up 20%, and the remainder are intermediate-phase. Descriptions of the color phases have been published (*1, 2*); an approximation of the color patterns is shown by Harrison (*3*). Low-latitude populations reside along the Antarctic Peninsula, or "maritime" Antarctica, which is warm and wet and is the area frequented by almost all persons on nature tours. The latitude of Palmer Station, the locality where the skua controversy described in the 20 July issue of *Science* took place and near the southernmost point of most nature tours, is only 64°S. Although I have not taken a detailed survey on my five trips to the Antarctic Peninsula area, less than 5% of South Polar skuas there can be classified as light-phase. I have seen none as light as the one pictured, which is an extreme not uncommon farther south. The date of the photo is important because, in the continous light of summer, skua plumage fades, even in the Antarctic Peninsula area; by late January skua plumage has been exposed to sunlight almost continuously for 2 months at Palmer Station and continuously for 3 to 4 months at Cape Crozier. Light-phase birds become even lighter. The plumage of the bird in the *Science* photo is similar in color pattern, but perhaps even lighter than the lightest bird shown by Devillers (*2*). The darker colorations of skuas in the warmer, wetter part of their breeding range is in accord with zoogeographic patterns observed commonly in other animals.

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REFERENCES

1. D. G. Ainley, L. B. Spear, R. C. Wood, *Condor* **87**, 427 (1985).
2. P. Devillers, *Auk* **94**, 417 (1977).
3. P. Harrison, *Seabirds: An Identification Guide* (Houghton Mifflin, Boston, MA, 1985).

Changing Science

We are grateful that Eliot Marshall (News & Comment, 6 July, p. 14) gives the National Science Foundation credit for keeping the door open to a broad range of ideas. But it is unfortunate that he keeps alive the overused literary scenario of the unappreciated maverick versus the closed-minded establishment.

For example, he neglects the effect on the science of his time of Alfred Wegener's ideas of "moving continents." Wegener was not an unheard voice crying in the wilderness. His book *Die Entstehung der Kontinente und Ozeane* ran through four editions, and journals saw no problem in publishing his articles (*1*). His effect on scientific thinking was like the tide coming in, slow but steady. The first science book I remember reading in junior high school (about 1940) (*2*), written during Wegner's lifetime, gave full credit to him and his idea of continental drift. By 1955 this idea was in the mainstream of science as a serious contender to explain the history of the earth (*3*). At the time of his tragic death, Wegener was a respected meteorologist, not an "intellectual outcast." And he was not alone in postulating boldly that continents moved (*1, 3*).

Science has changed totally several times over in the last 40 years. Most of our present scientific thinking is less than a decade or so old. Ideas "beyond the pale" crowd in and change science. I have found that scientists vote with their feet quite nimbly. The unseen hand of self-interest dominates the scientific marketplace. Any discussion of an "uphill battle for acceptance" should include such counterexamples as relativity, quantum mechanics, DNA, and the quark model, all of which gained acceptance as fast as word got around. The question could better be phrased, What are the dynamics that make some ideas take months and others take decades to find their equilibria? It is tempting to inject the drama of rejection into accounts of science [a technique perfected by some parts of the popular press (*4*)], but the scientific arguments should not be relegated to a secondary role.

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REFERENCES AND NOTES

1. See, for example, M. Schwartzbach, *Alfred Wegener: The Father of Continental Drift*, C. Love, transl. (Science Tech, Madison, WI, 1987).
2. W. M. Reed, *The Earth for Sam: The Story of Mountains, Rivers, Dinosaurs and Men* (Harcourt Brace, New York, 1930), pp. 45–47.
3. G. A. Barnard, as quoted in N. I. Fisher, T. Lewis, B. J. J. Embleton, *Statistical Analysis of Spherical Data* (Cambridge Univ. Press, New York, 1987), pp. 12–13; P. M. S. Blackett, *Lectures on Rock Magnetism* (Weizmann Science Press, Jerusalem, 1956), pp. 31–37.
4. See D. Hofstadter's discussion of the *National Enquirer* [*Sci. Am.* **246**, 18 (February 1982)].

Boron Neutron Capture Therapy: The Role of Peer Review

I write to comment on the 13 April article by Mark Crawford, "Pork in a medical wrapping" (News & Comment, p. 156) and the subsequent letter (20 July, p. 227) by Ronald V. Dorn III *et al.* of the Idaho National Engineering Laboratory's (INEL's) Power Burst Facility's (PBF's) boron neutron capture therapy project. The most important issue raised by Crawford's article is whether the decision-making process on funding of scientific research by the federal government should be permitted to bypass or (more accurately in this case), to ignore, peer review. The INEL group has used and is using political clout to obtain large amounts of funding, contrary to the recommendations of well-qualified peer-review panels, for their boron neutron capture therapy (BNCT) project. In previous years, this funding has exceeded that for peer-reviewed and recommended BNCT projects in other