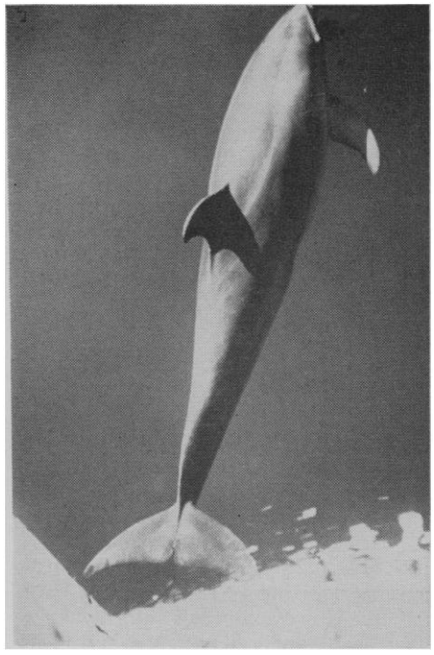

Fig. 1. A dolphin riding the bow wave of a small ship.

not topple over and out of position due to the apparent unbalanced upward force on its tail flukes. In this regard both gentlemen seem to have ignored the fact that dolphins and porpoises also have well-developed pectoral flippers. Might they not adjust the angle of attack of these pectoral flippers so as to produce an upward moment forward of their center of gravity which balances the upward moment from the tail flippers astern? Negative buoyancy, or an orientation of the total-body hydrofoil such as to produce a counteracting downward force, would, of course, be necessary in this situation to prevent the animal's being pushed to the surface.

MALCOLM S. GORDON
Department of Zoology,
University of California, Los Angeles

References and Notes

1. P. F. Scholander, *Science* **129**, 1085 (1959); W. D. Hayes, *ibid.* **130**, 1657 (1959); P. F. Scholander, *ibid.* **130**, 1658 (1959).
2. These observations were made during an expedition supported by U.S. Public Health Service grant No. RG-7114.

Chestnuts

Will you please ask the writers of letters on "The Chinese chestnut" [*Science* **132**, 366 (5 Aug. 1960)] what they really mean by this phrase and the phrase "the American chestnut"? I suspect that the writers are referring to *Castanea dentata* Borph. versus *C. mollissima* Blume, but they do not say so. They leave the reader to finish their work for them.

There are at least ten species of

Castanea Mill., the genus of chestnuts, in the temperate regions of the Northern Hemisphere. Three species occur in China, Japan, and Korea, and there are possibly half a dozen more in the eastern United States. To attempt to distinguish chestnuts as shrubs or trees is scarcely scientifically accurate, as one of the writers shows. In the United States there are several native shrubby chestnuts. One of the writers, incidentally, implies that "the spreading chestnut tree" of Longfellow's poem belonged to the genus *Aesculus* L., possibly *A. hippocastanum* L., instead of *C. dentata*. I agree, but it would be interesting to know whether this is an ascertainable fact.

G. NEVILLE JONES
Department of Botany,
University of Illinois, Urbana

G. Neville Jones is obviously justified in criticizing us for not using Latin names. However, each of us knew what we were referring to when we said "American chestnut" or "Chinese Chestnut." I felt that if I used the Latin names I would be trying to make people think I am a scientist, which I am not. I am just a plain old nut grower who subscribes to a magazine called *Science*.

Regarding Longfellow's chestnut tree, it is not hard to pin it down as a horse chestnut. It was located in Cambridge, Mass., within view of Longfellow's house, and did indeed shelter a blacksmith's shop. The village authorities chopped the tree down in 1876, over the vigorous protests of Longfellow and others. They said it was a menace to those driving under it with heavy loads. My source for that information is *The Horse and Buggy Age in New England* by Edwin Valentine Mitchell.

ROBERT RODALE
"Organic Gardening," Organic Park, Emmaus, Pennsylvania

Hybrids and Growing Practices

In his recent article, "Hybrid corn and the economics of innovation" [*Science*, **132**, 275 (1960)] Griliches treats the use of hybrid seed as if it were an isolated practice. Actually, many practices in proper combination are needed to produce a good corn harvest. True, adapted hybrids have the genetic potential to respond to high levels of plant nutrients and to adequate supplies of soil moisture; yet where these are not present the hybrid has little if any superiority over good old varieties.

On the dark-colored soils of the corn belt the hybrids gave an immediate response on many farms because of the excellent soils. But elsewhere it was much more difficult to get the same effects because the other soil management practices had to be devel-