Letters

King Carlos I, Marine Biologist

In describing a zoological paper published in 1967 by Hirohito, Emperor of Japan, Komai (Letters, 4 Aug. 1967) stated that so far as he knew there is no precedent of a sovereign signing his name as author to a biological publication. I would like to point out, however, that from 1897 to 1907 King Carlos I of Portugal who, like Emperor Hirohito, was a keen naturalist, published and signed with his name, Carlos de Bragança, the following works in the field of biology, some of them illustrated with his own drawings:

Yacht Amelia: Campanha Oceanographica de 1896 (Lisbon, Impresna Nacional, 1897)

"Pescas Maritimas: A Pesca do Atum no Algarve em 1898," *Res. Invest. Sci. Yacht Amelia* (1899), vol. 1

"Rapport préliminaire sur les Campagnes de 1896 à 1900. Introduction. Campagne de 1896," *Bull. Campagnes Sci. Yacht Amelia* (1902), vol. 1

Catalogo Illustrado das Aves de Portugal, vol. 1. Estampas 1-20 (Lisbon, Impresna Nacional, 1903)

"Ichthyologia. Esqualos obtidos nas Costas de Portugal durante as Campanhas de 1896 à 1903," *Res. Invest. Sci. Yacht Amelia* (1904), vol. 2

Catalogo Illustrado das Aves de Portugal, vol. 2. Estampas 21-40 (Lisbon, Impresna Nacional, 1907)

In the publication "Ichthyologia. Esqualos obtidos nas Costas de Portugal . . ." a new species of deepwater shark, *Odontaspis nasutus*, was described.

King Carlos I was one of the pioneers of marine biology in Portugal. He privately acquired and operated three oceanographic ships during his lifetime, the *Amelia, Amelia II,* and *Amelia III.* The last was specifically designed and built for oceanographic work. All were used in a number of important scientific cruises off the Portuguese coast. He also organized a small but excellent marine station at Cascais, near Lisbon, which unfortunately, because it was entirely maintained by his private money, did not survive after his death.

Although Carlos's preserved collections of marine animals were not properly cared for in the years following his untimely and tragic death in 1908, they were still adequate to provide material for H. Vilela's 1936 publication "Crustáceos Decápodes. Estomatópodes. Colecção Oceanográfica de D. Carlos I" **40** *Trav. St. Biol. Mar. Lisbonne,* and for B. C. Gonçalves's 1942 publication "Peixes. Colecção Oceanográfica de D. Carlos I" **46** *Trav. St. Biol. Mar. Lisbonne.*

Part of the excellent scientific library of King Carlos, which includes, for example, a complete set of the *Report on the Scientific Results of the Voyage of H.M.S.* Challenger, is now in the Instituto de Biologia Marítima at Lisbon.

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Whom Does Power Corrupt?

I agree with Price (Letters, 31 May) who stated that the military is no more megalomaniacal than other elements of the society. If one were to index the professional training of those who have successfully executed a putsch, he would observe the medical arts to be high on the honor roll. Just to mention two of the foremost representatives of this illustrious occupation, there is Duvalier of Haiti and El Attassi of Syria. The former rules by voodoo, the latter by decollation of his opponents. This supports the age-old axiom that the vision of power can corrupt the most honorable man. Only a society which incorporates a system of checks and balances (including the military) can survive and prosper.

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Hudson Institute Studies

Boffey's review ("Hudson Institute: Think tank's civil defense work criticized," 5 Apr., p. 52) was an accurate account of the information in General Accounting Office report B-133209 concerning the performance of Hudson Institute on three Office of Civil Defense contracts. Without attempting to assess the value to the federal government or Hudson Institute and other similar research organizations of a report of such limited scope, I would like to provide some additional information.

During the course of the GAO review, detailed investigation was made of five contracts between OCD and Hudson Institute. Two of these were not included in the final report. One was a study by Herman Kahn and others to further develop the "escalation ladder" concept of crises and the "Alpha," "Beta," and "Gamma" scenario approaches. The other was a contract in which Robert U. Ayres made the first definitive probe into the long-term consequences of nuclear war. Both studies, in my judgment, are excellent examples of the benefits that can be realized from the "think tank" approach. My overall view is that Hudson Institute has made a substantial contribution to the development of civil defense concepts.

As noted in the GAO report, and in Boffey's account, the OCD has acted to improve the implementation of its procedures to manage research contracts. We seek a balanced approach that provides responsible administration without disrupting the productivity and quality of original research.

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London Fog

In Wolman's article on air pollution (29 Mar., p. 1437), the "great blanket of fog spread over the Metropolis" that was indeed a reality in Sir Edwin Chadwick's time has gradually been swept away by the provisions of the Clean Air Act of 1956, and by voluntary changes in fuel usage. The impression that "London continues to this day to struggle with the fog and its consequences" is very much out of date.

Reductions in visibility may be caused by water droplets or by the accumula-

tion of smoke or other particulate matter. However, since air temperatures are higher in the center of London than in surrounding areas, and there is less vegetation, wet fog seldom forms here, even when it is present in the suburbs. As control of smoke increases, there is also less chance of any serious reduction in visibility. Already in the heart of London we can enjoy air that is no smokier than that in many small communities up and down the country. The grime of ages has been washed from St. Paul's Cathedral and from many public buildings, with a reasonable prospect of their remaining clean for many years to come.

We still suffer from a substantial amount of pollution by sulfur dioxide, and traffic fumes are unpleasant in busy streets, but if conditions were still as they were in Chadwick's day there would have been little point in building a revolving restaurant 600 feet above the city so that patrons could admire the view.

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Mining in Glacier Bay Monument

In Carter's review (29 Mar., p. 1449) of the Sierra Club book, *Glacier Bay*, he states that nature conservationists oppose mining of significant nickel-copper and molybdenum deposits in the Glacier Bay Monument [although these strategic metals are scarce in the U.S.] and that

> If there should be a critical shortage of metals, any prohibition imposed by Congress on mining in a Glacier Bay National Park could, of course, be lifted by Congress. In fact, such authority could be delegated to the President for use at his discretion. The fear of some that critically needed resources may be kept permanently "locked up" in wilderness preserves always has been baseless.

That fear is not baseless. The theory that presidential "unlocking" of withdrawn minerals makes them available for imminent emergency use is unsound, because many years must elapse between exploration, discovery, development, and finally, access to the metals. It is true that "economists know no way to make benefit-cost analysis adequately reflect the intangible values of wilderness and other natural environments," but equating scenery with price