Letters

Unknown Species in the Sea

Mueller suggests but does not mention specifically a major and virtually insuperable problem which plagues any ecological survey in tropical waters today; that is, the imperfect knowledge of the existing fauna ("New canal: What about bioenvironmental research?" 10 Jan., p. 165). A study now in progress on the decapod shrimps of the Smithsonian-Bredin Caribbean Expeditions of 1956, 1958, 1959, and 1960 discloses that nearly 20 percent of the species collected had not been known before. Most of these new species occur in shallow water and are probably common; they could be found by any amateur collector with a hammer for cracking dead coral and a net for sweeping grass flats. One of my colleagues recently completed a review of the presumably well-known stomatopods or mantis shrimps of the western Atlantic; of the 62 species now known from that area, 24 were previously undescribed. These examples are not unique.

Only on those occasions when we need to know how a nuclear experiment may affect the food resources of the population of a Pacific island, what animals may be vectors of an epidemic disease, or what species might be introduced to control an agricultural pest does it seem important to know the kinds of animals and plants with which we share this planet. At other times we are told that all of the "important" species have been described and that our students had better consider careers in a more "meaningful" branch of biology. Even those of us who have become systematic biologists in spite of such advice are cautioned by some of our more illustrious colleagues not to waste time describing species but to pursue "imaginative" aspects of taxonomy, usually involving test tubes and computers.

The time is still far in the future when a tropical marine ecologist can identify the components of an ecosystem of a food chain from his handy pocket guide. The manifold gaps in our knowledge of the fauna and flora of the world can be filled with least delay if the appropriate private and governmental institutions, especially our natural history museums, can gain continuing support for specialists to work on those groups of animals and plants which still need more extensive study. There are enough potential descriptive biologists in every generation to get the job done if they are given encouragement and reasonable financial support. Finally, those few of us who are now engaged in the time-consuming task of describing new and incompletely known taxa can best contribute to the undertaking by concentrating on that effort and leaving most of the temptingly interesting philosophical and experimental aspects of systematic biology to our colleagues who have long since completed the alpha and beta phases of their work.

Until the units (species) of the multidimensional net that populate the earth can be recognized and their complex interrelationships understood, problems such as that posed by a sea-level canal linking two major oceans continue to lead to frustration rather than solution.

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Those Smelly Roman Lamps

Since the discovery in recent years that certain airborne odors, "pheromones," are capable of producing a number of reproductive changes, including abortion, in a variety of different animals, it is of great interest to note that the phenomenon had been noted for the human female as early as the first century A.D. (see Altschule's letter, "Grecian winds," 3 Jan.). Pliny the Elder (about A.D. 23–79) wrote, "One feels pity and even shame in realizing how trivial is the origin of the proudest of animals, when the smell of lamps being put out usually causes abortion" (*1*).

Pliny's "usually" (plerisque) undoubtedly represents a gross exaggeration. I wonder how true this observation was? It would be of interest to know what was burned by Romans in the lamps they customarily used. What would have been released by Roman lamps that might have had the effect stated by Pliny?

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Reference

1. Pliny, *Natural History*, H. Rackham, Transl. (Harvard Univ. Press, Cambridge, Mass., 1952), p. 534.

Aspirations of Black Colleges

Ronkin's letter (3 Jan.) discussed the education of foreign students in Ph.D. programs. Their problems are familiar to me as I received my Ph.D. 10 years ago in a technical science, have worked in higher education for 11 years, and I am Black. Whenever persons who are graduates of primarily Black colleges receive their advanced degrees in science, agriculture, and engineering at northern American universities, they may return to the South eager to continue their professions in the manner in which they have been trained. Needless to say, this is difficult to do in a college with a $3 million operating budget when one has come from an institution having a budget of $75 million as well as the prestige and expertise to acquire funds and identify relevant research areas.

The solution for these new faculty members lies not in the worthy suggestions of Ronkin, because the problem fundamentally reflects the aspirations of academic institutions and their reluctance to define their roles in relation to one another and to their constituent communities. If a university is serving primarily an underdeveloped region, it should provide the expertise and techniques which that region can best use for its development. This may mean assuming a role less glamorous than becoming a proving ground for a few future Nobel prize winners. This is not to say that highly technical and theoretical research should be neglected, but a policy should be clearly defined