The Egyptians Worked Harder than LKB
to produce PYRAMIDS — but then they did not have the LKB Pyramitome.

This latest addition to the LKB Ultramicrotomy Laboratory is both Pyramid Maker and Histo-microtome in one instrument, a valuable design combination that is unique on the market today. The Pyramitome cuts plastic specimen blocks into the pyramid shape needed prior to sectioning with a microtome. The combination design of this instrument has the advantage that it provides both large pyramids from which survey sections can be cut and also the sections.

The Pyramitome mechanically shapes pyramids with positively parallel sides, perpendicular to the cutting direction, so furnishing straight ribbons of sections, free from "fringed" edges, that are easily collected from the surface of the trough liquid.

Trimming feed and pyramid shape can be mechanically selected, saving time in busy laboratories.

The Knife-turret accommodates three glass knives, up to 10 mm thick. The knives are set to their working position prior to trimming, as one knife is used so a new knife can be rotated to exactly the same work position. The use of glass knives in the Pyramitome enables completely translucent pyramids to be produced making it easy to view the embedded tissue.

Diagrammatic representation of large survey sections for light microscopy and small ultrathin sections of area of interest for examination in the electron microscope.

The Pyramitome — newest of the LKB microtomes.
careers in the United States. In any case, I believe that they would agree with me that the creation of so many excellent science departments in the “non-Ivy League” universities of the United States since World War II is not compatible with the argument that “institutional origins are the primary determinants of later rewards.”

With regard to Medlin’s letter: I am, of course, aware that research is carried on in Soviet universities (having paid six visits to the Soviet Union since 1956). However, in the natural sciences (to which I was limiting my remarks), the contrast in the quality of research (and facilities) of the universities and the academy institutes is striking. This is especially true in places like Moscow and Leningrad; in the new academic town of Novosibirsk, the liaison between the university and the academy institutes has been patterned on the American model. I am convinced that one of the chief reasons for the outstanding American performance in basic science is our system of graduate education (and I think the Russians are now recognizing this fact) and, in these days of student rebellion, I used the Soviet comparison to underline this point. I do not believe that the Soviet dichotomy exists in Western Europe.

R. E. MARSHAK

Department of Physics and Astronomy, University of Rochester, Rochester, New York 14627

Australia’s Appeal to Ph.D.’s

Rodney Willix (Letters, 22 Nov.), commenting on the lack of opportunities for Ph.D.’s in Australia, has stated only one aspect of a complex situation relating to the employment of scientists here. A presumed glut in the physical sciences is said to be confirmed by the number of Ph.D.’s “who continue to live in the United States for longer periods than they originally intended.”

While it is probably true that Ph.D.’s do not return because of the comparatively poor level of research support provided both by government and industry, it is also very relevant to point out that, unless an individual has pressing personal reasons, he may be reluctant to return to a country where professional salaries and hence real purchasing power are close to half those pertaining to appointees of equivalent status in the United States. Also it comes as a shock to experience the substantially higher taxation rate levied on individual incomes in Australia.

Australians as a whole are barely aware of the importance of research and its effect both directly and indirectly on the economy. It is significant that many research projects both large and small are relying heavily on funds from U.S. sponsors. While it should be possible to reduce this component over the next decade, it would be catastrophic to have it cut off overnight. I, for one, am grateful for the amount of continuing U.S. research support for nuclear physics which we have received over the past few years; I am proud of the calibre of Ph.D.’s that have been produced; and I am agreeably surprised that employment in industry has been found in the last year for those seeking it.

EDMUND G. MUIRHEAD

35 Minerva Avenue, 3052, Victoria, Australia

Fluoride: Nature’s Own

A. R. Miller’s criticism (Letters, 3 Jan.) of Sopolsky’s comparison of fluoridation to chlorination and pasteurization is right but for the wrong reasons. Chlorination and pasteurization—valuable though they are—are nevertheless actions in which man surmounts the threats of nature. Fluoridation, on the other hand, is an action in which man restores the benefits of nature. Fluoride is an essential trace element, found in many local water supplies but deficient in others. If government authorities assume the responsibility of supplying water—as the public would have them do—then they would be culpable if they did not supply the essential trace elements which under optimum circumstances are furnished by nature. At any rate, we can be sure that nature never intended them to be supplied in toothpaste!

GEORGEY EDSELL

375 South Street, Boston, Massachusetts 02130

The Pill Doesn’t Poison

The comment on “Oral contraceptives: Government supported programs are questioned” (7 Feb., p. 553) contains a statement which to my knowledge is absolutely untrue. Mueller states that the accidental ingestion of oral
contraceptives by children accounts for almost as many deaths as aspirin does. This information is attributed to the Food and Drug Administration.

The September–October 1968 bulletin from the National Clearinghouse for Poison Control Centers does not even place oral contraceptives in a separate listing as it does aspirin. In 1967 aspirin accounted for 23 percent of the accidental ingestions in children under 5, while hormones accounted for only 1.9 percent. In 1966 there were 92 deaths in children under 5 from aspirin and salicylate ingestion while the total for all drugs was 155.

The other argument against such a statement is that the amount of active hormone, progesterone and estrogen, in oral contraceptives is relatively small in comparison to the amount that would be required to cause an adverse pharmacological reaction in a small child. . .

CHARLES R. BRINKMAN, III
Department of Obstetrics and Gynecology, School of Medicine, University of California, Los Angeles

Brinkman is correct. The Poison Control Center of the Public Health Service says the latest figures, for 1967, show that there were an estimated 800 reported ingestions of oral contraceptives that year, but no deaths. I was incorrectly informed by a former FDA official who apparently received the information from the Poison Control Center of the St. Louis Children’s Hospital. It is believed that the error occurred at the source when ingestions were equated with accidental poisonings.

MARTI MUELLER
Science

Extinction by DDT

Although one cannot help but notice the similarities between the disasters associated with the use of DDT in Wisconsin (7 Feb., p. 548) and the Santa Barbara oil spillage, there is one important difference. The loss of bird and marine life at Santa Barbara, while tragic, does not appear to threaten any one species with extinction as does the continued use of DDT. In both cases, however, conservationists’ warnings have gone unheeded.

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