

SCIENCE

21 July 1967

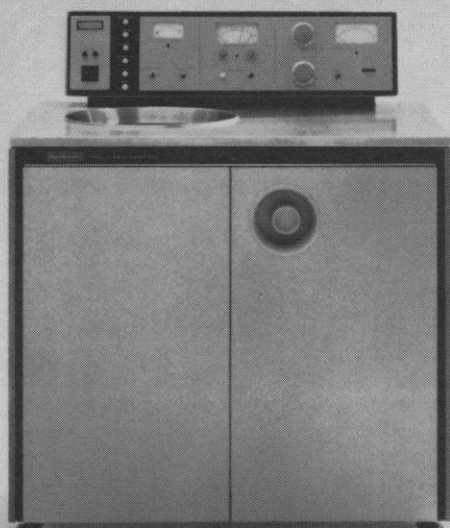
Vol. 157, No. 3786

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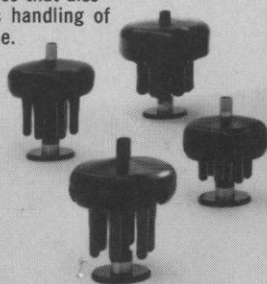


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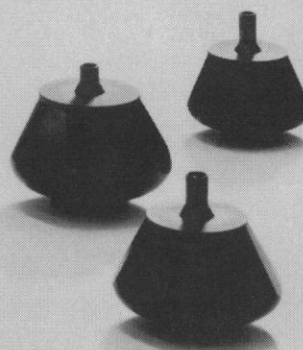
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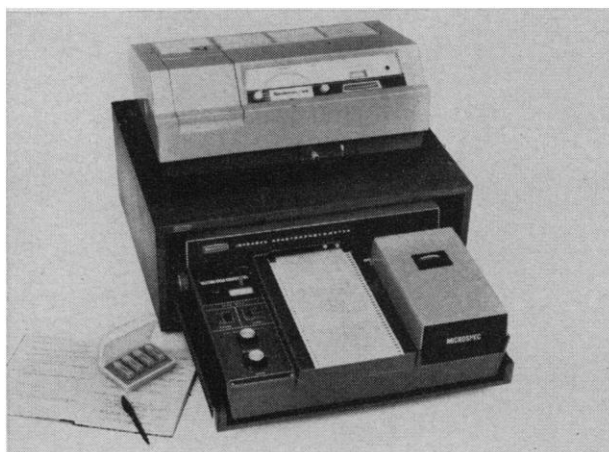
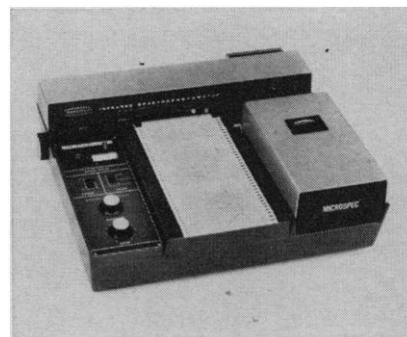
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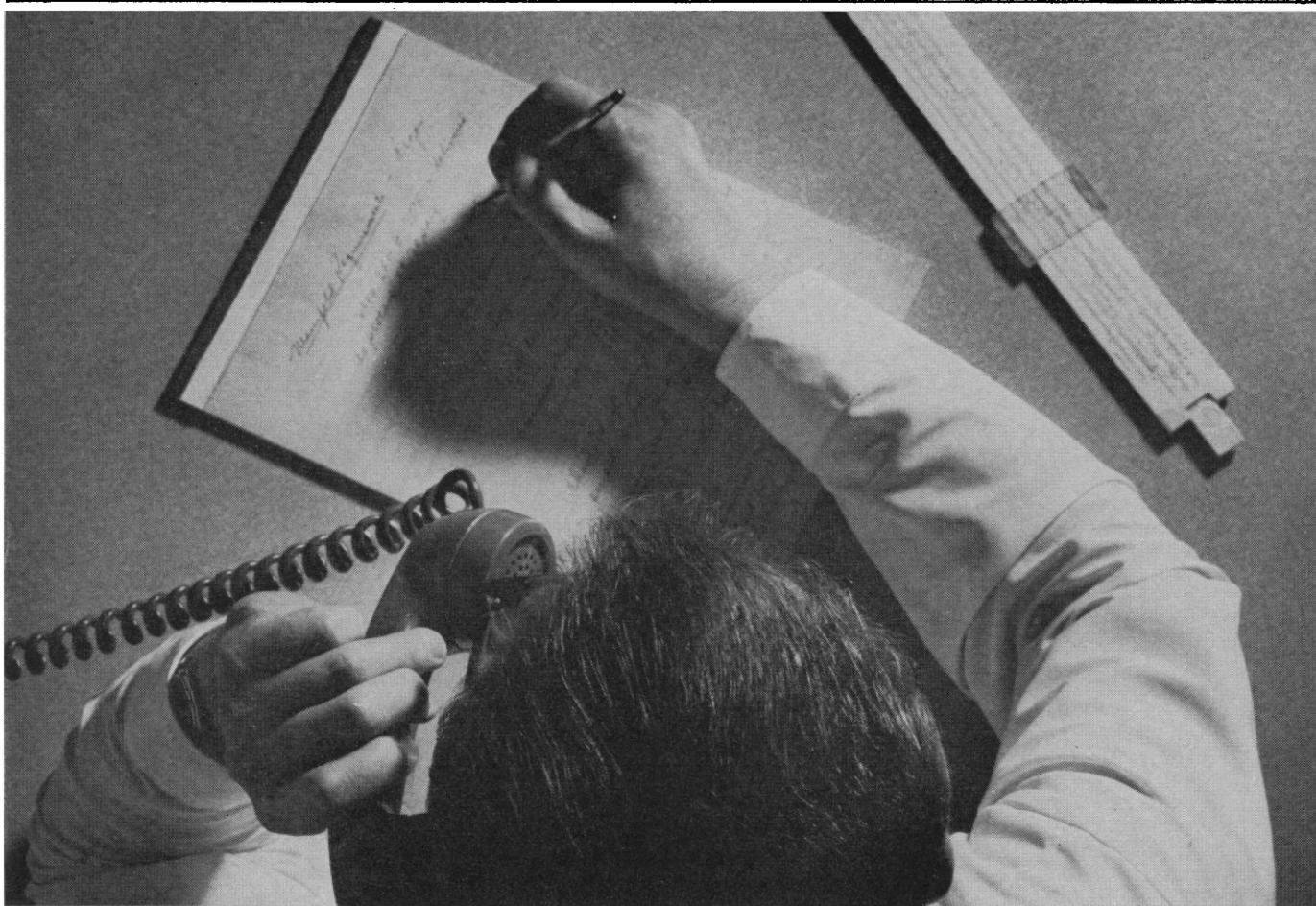
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COVER

New York City traffic patterns, vicinity of Park Avenue north of the Grand Central Station area. Aerial photographs are being used to collect data needed for the development and testing of mathematical models of traffic flow. See page 273. [Sky Count Aerial Studies Group, The Port of New York Authority]

The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objects are to further the work of scientists, to facilitate cooperation among them, to improve the effectiveness of science in the promotion of human welfare, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.



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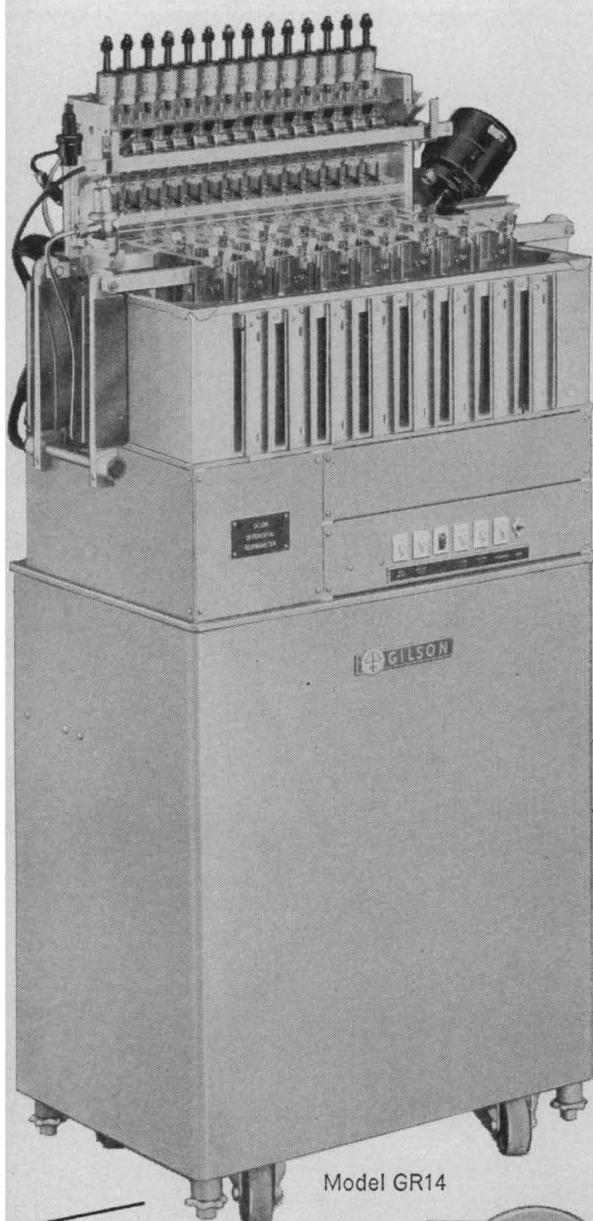
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The Tortoise and the Jet

The tortoise beat the hare. Can it also beat the jet? The racetrack is Aldabra, an uplifted coral atoll in the Indian Ocean, 260 miles northwest of Madagascar and 400 miles east of Africa. The tortoise is the giant land tortoise, and Aldabra is its only remaining home in the Indian Ocean. The jets are of the United States and British air forces, which want to develop Aldabra for military use.

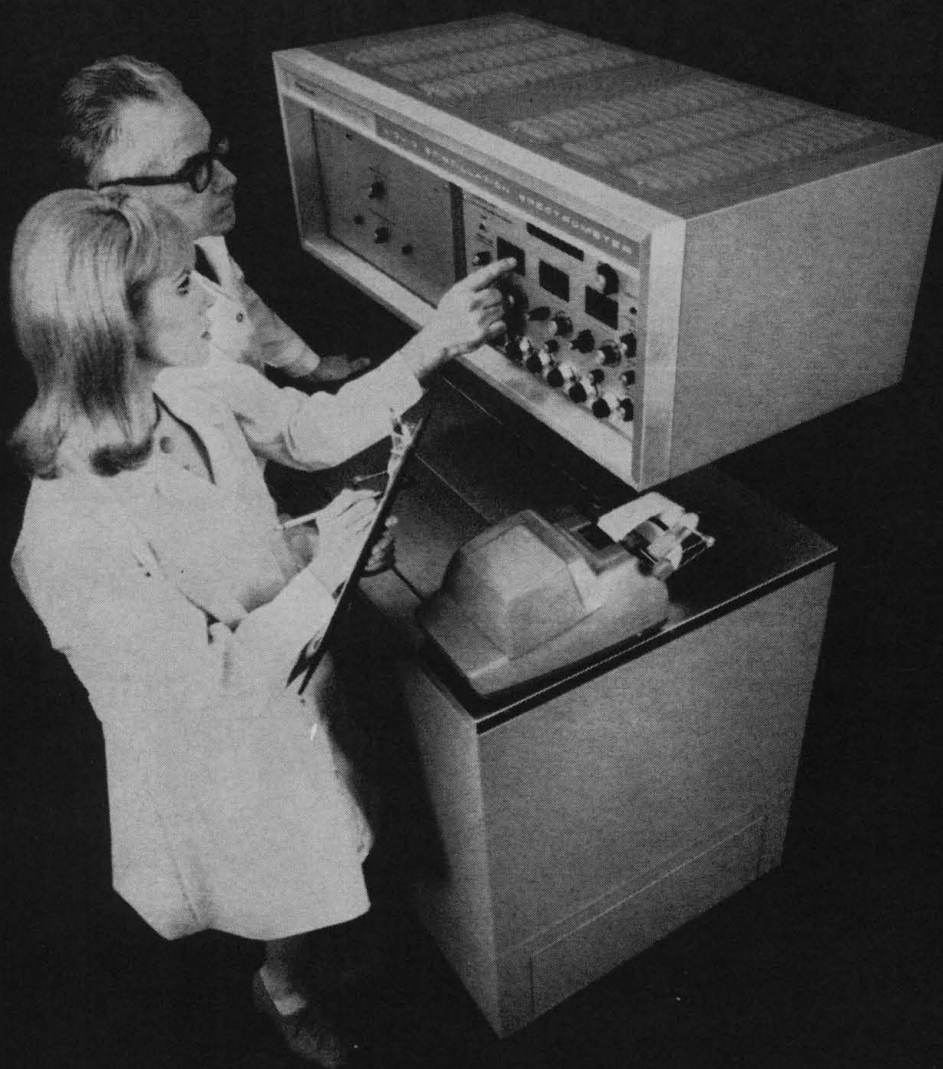
Obscure and almost uninhabited, Aldabra has a rich and unique ecosystem. It is the breeding place of the frigate bird for the entire Indian Ocean, and home of the last colony of flightless birds in the Indian Ocean. Of its 22 species of land birds, 12 species or subspecies are found nowhere else. About a quarter of its species of invertebrates are believed to be found only on the island. Aldabra is a major breeding place of the increasingly rare edible green turtle and the hawksbill turtle. Of some 175 species of higher plants known on the island, 18 or more are unique. When still undisturbed, such islands provide ideal opportunities to study evolutionary processes. Aldabra is the ecologically richer of the last two nearly undisturbed uplifted coral atolls in the world. Raymond Fosberg, of the National Academy of Sciences staff, calls the island "scientifically, the most important area of its size remaining in that part of the world." The Royal Society is sending an expedition there in August and would like to establish a small, permanent research station.

With support from the National Academy of Sciences, the Smithsonian Institution, and several international organizations, the Royal Society has proposed that Aldabra be totally preserved for scientific investigations, and in May it so recommended to the British Secretary of State for Defence. The air forces, however, need an airfield in that region and consider other islands much less satisfactory. The Secretary promised to consider the Royal Society recommendation and said that, if the decision is made to go ahead with military development, "our object . . . would be to make sure that changes in the ecosystem of the island are kept to a minimum."

But it is doubtful that there can be dual use. The atoll is too small. Road, harbor, causeway, and other construction would bring major physical alterations and connect the now separated islands of the atoll. The larger birds would be a hazard to aircraft, and some species would probably have to be exterminated. The home of the giant land tortoise is precisely the best part of the island for airfield construction. The suggestion that the airfield be surrounded by a wall seems unsatisfactory. A wall could exclude the tortoise, the flightless birds, and some other animals, but could not contain their imported enemies. Nor is temporary development and use a satisfactory compromise; once a species is destroyed, or an environment drastically invaded, there is no return to the original state. The current program to study what little remains of native Hawaiian plant and animal life is evidence of the need to study island ecologies before invasion brings ecological chaos.

Will the jet replace the tortoise on Aldabra? Perhaps. Military needs rightfully have high priority, and man has powerful weapons. He can win over tortoises, passenger pigeons, the blue whale, the Great Auk, the Moa, and other animals, and he can win most easily in the fragile ecology of a small island. The decision between the tortoise and the jet will be a governmental and a political one. The jet can win, but the more virgin areas we destroy, the more we impoverish our natural heritage. British and American government councils must weigh this fact in deciding whether to build on Aldabra or elsewhere.—DAEL WOLFLE

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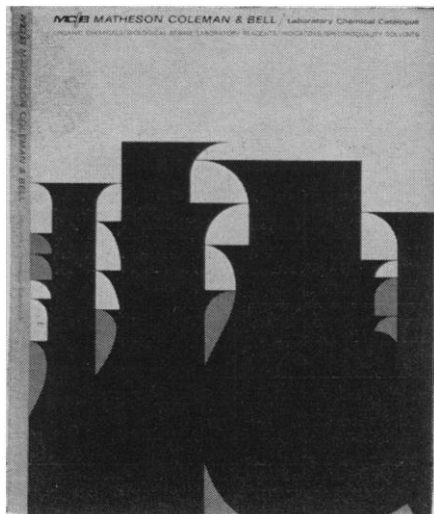


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sediment deposited under the influence of a mat of algae was questioned by several participants. Laminated structures termed "stromatolites" in the field may consist largely of fossil algae, and both Rezak and Logan showed illustrations of laminated caliche that could easily be misinterpreted as algal stromatolites.

The conference was sponsored by the Department of Geology of Johns Hopkins University with support from the Shell Companies Foundation.

ROBERT N. GINSBURG
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Calendar of Events

Courses

Bio-Medical Telemetry. Applications and Techniques, Boston Univ., 27-30 Sept. Intended for scientists, physicians, and engineers. Fee: professional, \$125; student, \$60. (Bio-Medical Telemetry Course, Office of Conference Development, Metrocenter, Boston Univ., 755 Commonwealth Ave., Boston, Mass. 02215)

Source Sampling and Analysis of Sulfur Oxides. Cincinnati, Ohio, 1-4 Aug. Intended for engineers and chemists. (Chief, Training Program, National Center for Air Pollution Control, 4676 Columbia Parkway, Cincinnati 45226)

Computer-Aided Integrated Circuit Design. Stevens Inst. of Technology, 11-15 Sept. Intended for engineers, physicists, and applied mathematicians. Fee: \$200. *Deadline:* 1 Aug. (G. J. Herskowitz, Dept. of Electrical Engineering, Stevens Inst. of Technology, Hoboken, N.J. 07030)

Inflammatory Diseases of the Eye. San Francisco, 5-9 Sept. (S. M. Farber, Continuing Education in Health Sciences, Univ. of California, San Francisco Medical Center, San Francisco 94122)

Nonlinear Estimation. Chicago, 11-12 Aug. Sponsored by Chemical Div., American Soc. for Quality Control. (F. Medgin, Research and Development Center, Swift and Company, Exchange and Packers Aves., Chicago, Ill. 60609)

Engineering with Adhesives. Hopatcong, N.J., 13-17 Nov. Fee: \$200. (L. S. Buchoff, Saul Gordon Associates, P.O. Box 566, Hopatcong 07843)

General Practice of Hospital Pharmacy. Chicago, 13-18 Aug. Intended for community pharmacists serving small hospitals and extended care facilities. Fee: \$85. (American Soc. of Hospital Pharmacists, Dept. of Education and Training, 4630 Montgomery Ave., Washington, D.C. 20014)

Scientific Photography for Research and Engineering. Hopatcong, N.J. 14-18 Aug. Instruction in techniques of photography and their application to scientific research, development, and engineering. Fee: \$200. (D. W. Mayer, Program Coordinator, Saul Gordon Associates, P.O. Box 566, Hopatcong 07843)

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