changes are the result of the interaction of RNA with one or more of the experimental parameters utilized. However, the findings are generally consistent with some of the reported clinical results.

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References and Notes

1. D. E. Cameron, *Am. J. Psychiat.* **114**, 943 (1958); ———, L. Solyom, L. Beach, *Neuro-Psychopharmacol.* **2**, 351 (1961); D. E. Cameron and L. Solyom, *Geriatrics* **16**, 74 (1961); ———, S. Sved and B. Wainrib, paper presented before Am. Psychiat. Assoc., Toronto, 1962.
2. M. Montanari, E. Cutolo, S. Mazzoni, *Arcispedale S. Anna Ferrara* **14**, 573 (1961).
3. E. Kreps, A. Smirnov, D. Chetverikov, cited by A. V. Palladin and G. E. Vladimirov, in *Proc. Intern. Conf. Peaceful Uses At. Energy, Geneva, 1955* (United Nations, New York, 1956), vol. 12, p. 402; H. Hydén, in "Biochemistry of the Central Nervous System," vol. 3 of *Proc. Intern. Congr. Biochem. 4th* (Pergamon, New York, 1960); W. C. Corning and E. R. John, *Science* **134**, 1363 (1961); W. Dingman and M. B. Sporn, *J. Psychiat. Res.* **1**, 1 (1961); E. R. John, *Ann. Rev. Physiol.* **23**, 451 (1961).
4. Acquisition is the progressive incremental change in the proficiency of performance as a result of repetitive presentation of conditioned and unconditioned stimuli under controlled conditions. Extinction is the progressive decremental change in performance as a result of repetitive presentation of the conditioned stimulus without the unconditioned stimulus.
5. RNA was purchased from Pabst Laboratories. Preliminary studies were conducted with 10 cent aqueous solution of yeast RNA, kindly supplied by Dr. D. E. Cameron, Montreal, Canada.
6. Sprague-Dawley rats were obtained from Charles River.
7. L. Cook and E. Weidley, *Ann. N.Y. Acad. Sci.* **66**, 740 (1957).

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Discovery of Right Whales in the Gulf of Mexico

Abstract. *Two whales were observed closely for an hour off Sarasota, Florida, by residents who provided observations of structural details which identify only the right whale,* Eubalaena glacialis, *a temperate and subpolar species previously known to range to the Florida east coast, but not to enter the Gulf of Mexico.*

On 10 March 1963, the Gulf of Mexico had a fresh wind and a chop off New Pass, Sarasota, Florida, when Ben B. Sanders and Paul Reeves, residents of Sarasota cruising in a 28-foot (8.4 m) boat, saw two whales swimming west in water only 30 to 34 feet deep (9.4 to 10.3 m). Together with Merton Wilcox, a precision instrument engineer and a consultant to Cape Haze Marine Laboratory, who joined them in another boat, Sanders and Reeves observed the whales from 3:30 to 4:40 P.M., approaching them as closely as 12 feet (3.6 m) in one instance. They described their experience to one of us within 22 hours. The only camera aboard took inadequate photographs, but the details reported to us seem to provide unassailable identification of the whales as right whales, *Eubalaena glacialis* and, thus, the first evidence of this species ranging into the Gulf of Mexico.

According to Sanders, Reeves, and Wilcox, these whales had (i) no dorsal fin; (ii) the mouth cleft in side view, high on the head and arched; (iii) a bumpy area in a ragged patch on the head forward of the blowhole; (iv) a length exceeding 40 feet (12.1 m), in the larger probably approaching 55 feet (16.7 m); (v) a color of charcoal gray and black; Wilcox and Sanders saw inconspicuous whitish patches low on the head near the eye; and (vi) a single spout 3 to 5 feet high (0.9 to 1.5 m). The whales created a slick in the choppy water above and around them, even when not breaking the surface. Most of the observations relate especially to the larger individual which showed itself more freely. The first five items identify only one species known to inhabit North Atlantic waters, the right whale, *Eubalaena glacialis,* and only one item could be construed as evidence against this: observed from behind, the blow or spout should have been double (or V-shaped) and higher (*1*). This incongruity may result from a defect in observation, or possibly from the whales' breathing less forcefully in relatively warm, shallow water. After corresponding on the diagnostic points, we double-checked these observations with the witnesses, and we see no cause to doubt that the animals described were right whales.

The right whale was the easiest and most lucrative species to catch, and by about 1750 it had been reduced in the North Atlantic to numbers too low for further economic exploitation (*2*). Their near extinction so long ago has severely limited scientific knowledge of the southern extent of their original range in the North Atlantic. One specimen from the eastern Atlantic, that would have passed as far south as 36°N. latitude in the Strait of Gibraltar, is known (*3*) from Taranto, Italy, and one from the western Atlantic was observed (*3*) near Charleston, South Carolina (just below 34°N.). One of us (*4*) recorded that a few individuals still reach the Atlantic coast of Florida in late winter, with one occurrence as far south as 26°15′N. Attainment of the upper Florida east coast by a few right whales seems now to be regular (*5*), but there is no previous evidence that this species ranges into the Gulf of Mexico (*2, 6*). By international agreement in 1929, the right whale was protected from commercial whaling (*1*) and since then its western North Atlantic population has evidently increased so that it is now straggling into the Gulf of Mexico.

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References and Notes

1. E. J. Slijper, *Whales* (Basic Books, New York, 1962), pp. 117, 118.
2. J. A. Allen, *Bull. Am. Museum Nat. Hist.* **24**, 319 (1908).
3. F. W. True, *Smithsonian Inst. Publ. Contrib. to Knowledge* **33**, 245 (1904).
4. J. C. Moore, *Am. Midland Naturalist* **49**, 122 (1953).
5. F. G. Wood, *Mariner* (Feb. 1954) p. 5; (Feb. 1958) p. 4 (mimeograph, Marineland, Fla.).
6. G. Gunter, *U.S. Fish Wildlife Serv., Fishery Bull.* **55**, 541 (1956).

2 May 1963

Transpiration by Sudangrass as an Externally Controlled Process

Abstract. *Transpiration from a well-watered sudangrass stand in a highly evaporative environment (Tempe, Arizona, in July) can be considerably increased by exposing a small plot of about 1 square meter to radiative and convective heat input. Thus, the transpiration of sudangrass in a full stand appears not to be determined by any physiological factor during any time of the day.*

A transpiring plant cover may, for purposes of analysis, be compared to an open water surface. However, unlike evaporation from open water, transpiration can be determined or limited by availability of soil water, capacity of water-carrying tissues, and impedance to vapor diffusion in the leaf in interstitial and stomatal pathways.

In this report we give data indicating