

SCIENCE NEWS®

The Weekly Newsmagazine of Science

A Science Service Publication
Volume 125, No. 1, January 7, 1984

E. G. Sherburne Jr. Publisher
Joel Greenberg Editor
Dietrick E. Thomsen Senior Editor/
Physical Sciences
Joanne Silberner Managing Editor
Judy Klein Production/Design
Director
Wray Herbert Behavioral Sciences
Deborah Franklin Biomedicine
Linda Garmon Chemistry
Cheryl Simon Earth Sciences
Julie Ann Miller Life Sciences
Janet Raloff Policy/Technology
Ivars Peterson Space Sciences
Jonathan Eberhart Assistant to the Editor
Wendy McCarren Science Writer Intern
Joan C. Armatniek Books
Jane M. Livermore Business Manager
Donald R. Harless

Scherago Associates Advertising
Fred Dieffenbach, Sales Director
1515 Broadway, New York, N.Y. 10036

Copyright © 1984 by Science Service, Inc.,
Editorial and Business Offices,
1719 N St., N.W., Washington, D.C. 20036.
Republication of any portion of SCIENCE NEWS
without written permission of the publisher is
prohibited.

Subscription Department
231 West Center Street, Marion, Ohio 43302

Subscription rate: 1 yr., \$27.50; 2 yrs., \$47.50;
3 yrs., \$67.00. (Foreign postage \$5.00 additional per
year.) Change of address: Four to six weeks' notice is
required. Please state exactly how magazine is to be
addressed. Include zip code. For new subscriptions
only call (1) 800-247-2160. Printed in U.S.A. Second
class postage paid at Washington, D.C. Title
registered as trademark U.S. and Canadian Patent
Offices. Published every Saturday by SCIENCE
SERVICE, Inc. 1719 N St., N.W., Washington, D.C.
20036. (202-785-2255)
ISSN 0036-8423

Letters

Sex-difference models lacking

I enjoyed your recent article "Masculine/feminine behaviors: New views" (SN: 11/19/83, p. 326). I too believe behavioral endocrinology is at the beginning of a revolution. Data obtained recently on uncommon domesticated species (e.g., ferret) and on wild species (e.g., Asian musk shrew, white-crowned sparrow, red-sided garter snake and unisexual lizards) show clearly that established concepts are inadequate and, further, that the rat, hamster and guinea pig (or, as Frank Beach called them in a now-classic article, the "ramstergig") are inappropriate as model systems for uncovering the fundamentals of hormone-behavior interactions. Your article pointed directly to what I view to be the greatest challenge to those of us

This Week

- 4 Cancer Cells: More Needles in the Haystack
- 4 Genes and cancer: This time for diagnosis
- 5 Radwaste program: A delay in plans
- 6 Oxygen changes in the Chesapeake
- 6 The brightest object
- 6 Moon sends ICE to comet
- 6 Submillimeter scope
- 7 Dental study upsets the accepted wisdom

Research Notes

- 8 Physical Sciences
- 8 Agriculture
- 9 Chemistry
- 9 Earth Sciences

Articles

- 10 Economy of Fusion
- 12 Launchlog '84: NASA Embarks on Its Busiest Year

Cover: Astronaut Bruce McCandless II models the Manned Mobility Unit, equipped with thrusters and guidance system, that he will use to maneuver around in space during the first 1984 flight of the space shuttle, one of numerous National Aeronautics and Space Administration missions planned for the year. (Photo: NASA)



Departments

- 3 Letters
- 15 Books

Science Service Institution for the public understanding of science founded 1921; a nonprofit corporation.
Board of Trustees—*President*, Glenn T. Seaborg; *Vice President*, Gerald F. Tape; *Treasurer*, Willis Harlow Shapley; *Secretary*, Julius Duscha; Joseph W. Berg Jr.; Edward Bliss Jr.; Bowen C. Dees; David A. Goslin; Milton Harris; Hilleary F. Hoskinson; Elizabeth F. Neufeld; O. W. Riegel; H. Guyford Stever; John Troan; Deborah P. Wolfe.

Director: E. G. Sherburne Jr.; *Assistant Director*: Dorothy Schriver; *Business Manager*: Donald R. Harless.

interested in understanding the origin and control of reproductive behavior.

David Crews
Assoc. Prof. of Zoology and Psychology
Univ. of Texas
Austin, Tex.

Although the article is limited to behavior, I will speculate and add that the increased hormonal level could also have its effect on the anatomical structure as well. In other words, the intrauterine positions of the fetal mice can have an effect on the genital development of the mice post partum. It may also be found that male mice that are out of large, predominantly female litters may also be affected in a similar fashion.

Steve Oifer
East Brunswick, N.J.

vom Saal answers:

We have looked at mouse testes and seminal

vesicles post partum. Males who were between females in utero exhibit about 30 percent more sexual activity, that is they mate faster and ejaculate more times. But these males have the smallest testes and seminal vesicles. We do not find that the proportion of male and female animals in a litter explains differences in later development. The only way we can account for the differences is to look at an animal's immediate neighbors in the womb.

Ed's note: A description of F. Mason Sones' work in coronary artery angiography (SN: 11/19/83, p. 328) cites the importance of the technique in coronary bypass surgery, which "saves the lives of as many as 170,000 Americans each year." That figure is the total number of operations done; not all of these operations may be necessary or life-saving, according to a National Institutes of Health study (SN: 11/15/83, p. 294).

JANUARY 7, 1984

3