

SCIENCE NEWS

The Weekly Newsmagazine of Science

A Science Service Publication
Volume 124, No. 1, July 2, 1983

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
Joan Arehart-Treichel	Biomedicine
Linda Garmon	Chemistry
Cheryl Simon	Earth Sciences
Julie Ann Miller	Life Sciences
Janet Raloff, Ivars Peterson	Policy/Technology
Jonathan Eberhart	Space Sciences
Pamela Taulbee Penny D. Sackett	Science Writer Interns
Jane M. Livermore	Books
Donald R. Harless	Business Manager
Scherago Associates Fred Dieffenbach, Sales Director 1515 Broadway, New York, N.Y. 10036	Advertising

Copyright © 1983 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

Ribs II

Dr. Noel Boaz suggests in his June 4 letter that SCIENCE NEWS and I have been unfair in our treatment of his work on the Sahabi dolphin rib. Boaz is correct in introducing his letter with the comment "Tim White has not demonstrated that the Sahabi clavicle is a dolphin rib." Our paper demonstrating the cetacean affinities of his fossil has not yet been published in the AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY but is post-proof.

Dr. Boaz presented a poster session that misrepresented the analysis of that paper (coauthored by myself and Suwa, Watters, Richards and Barnes) at the annual national meetings of the American Association of Physical Anthropologists last April. This presentation prompted Wray Herbert's SCIENCE NEWS report (SN: 4/16/83, p. 246).

Dr. Boaz's presentation and misrepresentation of our research at this meeting, months before we had even had a chance to publish, was not only surprising. It was, in fact, unethical because Boaz had reviewed our paper for the AJPA in 1982!

But Boaz claims that I was unfair and engaged

This Week

- 4 Shuttle 7: 'We Pick Up and Deliver'
- 4 Under zero-gravity conditions, splitting up is easy to do
- 5 Senile dementia linked to immunity genes
- 6 New way to see old magnetic domains
- 6 Marine fossils hint Antarctic ice cycles
- 6 Siberian site wins vote for boundary
- 7 New reports urge action on acid rain
- 7 Study shows stress decreases immunity

Research Notes

- 12 Biology
- 14 Environment
- 14 Biomedicine

Articles

- 8 Lucy's Family Problems
Cover: These two adult males both lived approximately 3 million years ago, but anthropologists cannot agree on their relationship: Are they representatives of the same early hominid species, or was *A. afarensis* (right) from East Africa ancestral to the South African *A. africanus*? Did these animals ultimately evolve into modern humans, or were they already on the road to extinction? (Photos courtesy of South African Journal of Science)



Departments

- 3 Letters
- 13 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.

in what he terms "ad hominem" sophistry in my interview with SCIENCE NEWS. I actually argued with *ad delphinem* actuality. It is time to set the record straight. Boaz's description of his dolphin rib fossil states that it has a sigmoid [S-



shaped] curvature characteristic of primate clavicles. As is apparent from the accompanying photograph of the fossil (center), dolphin rib (right) and chimp clavicle (left), there is no such sigmoid curvature in the fossil. In medicine Boaz's description might have been called malpractice. In biochemistry his portrayal would have been termed fraud. I [was] more than kind in [my] remarks about Dr. Boaz's identifications and behavior, as was SCIENCE NEWS.

Tim D. White
Univ. of Calif.
Berkeley, Calif.

Bluebird fans

Three years ago, at my college graduating class's 15th reunion, we were all asked to identify the most moving experience we had had within the past few years. Most of my classmates spoke of births and deaths or career accomplishments, not surprisingly.

In my case, after thinking the question over carefully, I had to conclude that the single event that stood out most glowingly in my recent life was the appearance of a nesting pair of bluebirds at my home in Leominster, Mass. I had

Continued on p. 13

JULY 2, 1983

3

Books

Books is an editorial service for readers' information. To order any book listed or any U.S. book in print please remit retail price, plus \$1.00 handling charge for each book, to **Book Order Service**, Science News, 1719 N Street, N.W., Washington, D.C. 20036. All books sent postpaid. Domestic orders only.

Aging: An Exploration — David P. Barash. "Aging," says the preface, "is a vast topic, a multi-faceted jewel which must be seen from many different angles to be appreciated, even if it will never fully be understood." This readable book explores the biological processes of aging, examines the history of aging in America and the social side of growing old and also visits three places in the world where longevity is common. U of Wash Pr, 1983, 240 p., \$14.95.

How Much Is Too Much?: The Effects of Social Drinking — Leonard Gross. The author set out to find "just what 'moderate' drinking was, and how much one could safely drink without forfeiting the social, psychological and even the physiological benefits of alcohol." Here is the evidence, pro and con, so that social drinkers can decide for themselves whether they might be drinking too much and so they can measure the risks of taking a drink. Random, 1983, 160 p., \$10.95.

Not Quite a Miracle: Brain Surgeons and Their Patients on the Frontier of Medicine — Jon Franklin and Alan Doelp. Describes five brain surgery cases, from the development of problems in each of the unaware victims to the thoughts and feelings of the doctors, patients and families before, during and after the operations. Includes graphic, gripping descriptions of the surgery itself. Doubleday, 1983, 274 p., \$16.95.

Plants of the Bible — Michael Zohary. An Israeli botanist explores the natural world of the Bible. Presents a vivid portrait of the Holy Land, its landforms, soils, climate and vegetal landscapes. He goes on to describe the individual plants, gives relevant biblical quotes, discusses each plant's life history and use. Beautiful color photographs illustrate each plant in its natural habitat. Cambridge U Pr, 1983, 223 p., color illus., \$16.95.

The Universe Within: A New Science Explores the Human Mind — Morton Hunt. Cognitive science, a multiple-discipline field, is the systematic inquiry into human thinking. The detailed findings of this new field tell us, says the preface, that the human mind is the latest and most superbly adaptive mutation produced by evolution and that the scientific study of how our minds function should enable us to use them far more effectively than we now do. Written for the general reader, this book reports research in such areas as memory and forgetting, conception formation, logical reasoning, inferential reasoning, and problem solving. Originally published in hardback in 1982. S&S, 1983, 415 p., illus., paper, \$9.95.

Venus — D. M. Hunten, L. Colin, T. M. Donahue and V. I. Moroz. Although the exploration of Venus by spacecraft began in 1962 and has continued, the end of 1978 was a landmark in these efforts: six probes reached the surface, one entered the upper atmosphere and three, an orbiter and two flybys, studied the environment. Much of what was learned from that effort is included in these 30 chapters by 69 collaborating authors. Fourteen of the chapters report Soviet Venus findings. U of Ariz Pr, 1983, 1143 p., illus., \$49.95.

Continued from p. 3

not seen a bluebird since my childhood (in Ohio). When first the male, then the female, appeared in mid-April and took up residence in the "official" bluebird nesting box I had installed at the back of my garden, I was absolutely bowled over. Despite the presence of English sparrows and tree swallows (which had used the box in previous years), my pair succeeded in fledging a healthy brood of four.

Though they failed to return in either 1981 or 1982, these two brave souls have made a lasting impression.

Thanking you for your fine article (SN: 6/11/83, p. 376).

Ralph S. Protsik
Brookline, Mass.

Good article by J. A. Treichel. I would like to know how to get the artificial nesting box Ms. Treichel writes about. Also any instructions on how to behave so that we can attract and keep these beautiful birds?

Ruth C. Sullivan
Huntington, W.V.

Editor's note

The North American Bluebird Society's address is: Box 6295, Silver Spring, Md., 20906, and its phone number is (301) 384-2798. In addition to artificial nesting boxes, the society also sells a book by Lawrence Zeleny called The Bluebird — How You Can Help Its Fight for Survival.

Correction: In "Buried fault blamed for Coalinga quake" (SN: 5/21/83, p. 329) movement along the San Andreas was described as "near-vertical." The displacement in fact is horizontal, as ground moves parallel to the fault line.

IMAGINEERING

-How to Profit From Your Creative Powers

By Michael LeBoeuf

All of us have greater creative potential than we believe, and all of us sadly under-use it. In this stimulating, practical book, Michael LeBoeuf shows us how systematically to promote creative thinking and apply it to get results, whether as individuals or groups. For example, 9 myths that inhibit creativity, the 5 major steps of the creative process, 9 exercises to strengthen your imagination, 10 techniques for generating new ideas, 3 types of group brain-storming, 9 ways to overcome resistance to change, 5 ways for building a network of essential contacts, and 12 ways to end procrastination.

A book to show you how to make the most of what you have.

256 pages, paperback, 5 1/4 x 8, \$5.95.

Science News Book Order Service 1719 N Street, N.W. Washington, D.C. 20036

Please send _____ copy(s) of **IMAGINEERING**.

I include a check, payable to Science News Book Order Service, for \$5.95 plus \$1.00 handling (total \$6.95) for each copy.

name _____

address _____

city _____

state _____

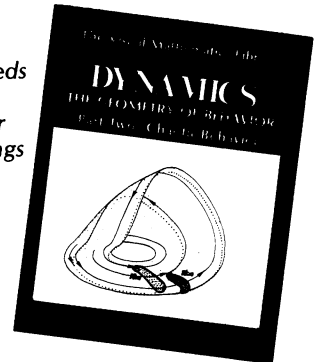
zip _____

RB98

CHAOTIC DYNAMICS

Hundreds
of
Color
Drawings

160
Pages



Just
Released!

**PART TWO of DYNAMICS:
THE GEOMETRY OF BEHAVIOR**

Non-linear Dynamics is an important new strategy in **modeling and simulating** the behavior of natural systems.

Part One (Periodic Behavior) and Part Two (Chaotic Behavior) are the first introductory texts on non-linear dynamics. (Also available: Apple II computer disks 1 and 2.)

TO ORDER: Send \$15/vol. for Part Two and \$25/vol. for Part One, plus \$4/vol. for shipping. Send \$15/disk for each disk plus \$3/disk for shipping. Please print clearly. VISA & MasterCard accepted w/card no., expiration date & signature. More info sent upon request.

AERIAL PRESS, INC.

Orders, Box 1360, Santa Cruz CA 95061