


**Share the Thrills of Exploring Outer Space!**



**\$194.95**

All DYNASCOPES, including this superb RV-6, 6-inch available on easy terms!


Now it's easy to join the thousands of serious amateurs who have discovered the excitement of exploring our mysterious universe. Your enjoyment begins right from the start, yet the challenges and rewards go on for years! And it's a hobby that can be shared at modest cost.

**Choose from a Full Range Of DYNASCOPES® 4" Starting at \$49.95**

Picking a telescope to fit your needs and your pocketbook is simple when you select a DYNASCOPE — the same instruments used by more than 150 schools, colleges and observatories. Prices begin as low as \$49.95, and your satisfaction is guaranteed by a full-refund warranty.

**FASCINATING GUIDE YOURS FREE!**

Read these valuable facts before buying any telescope. Mail coupon or postcard for your complimentary copy of this helpful guide.



Criterion Manufacturing Co.  
331 Church St., Hartford 1, Conn.  
© TM Registered U.S. Pat. Office

---

CRITERION MANUFACTURING CO.  
Dept. NL-43, 331 Church St., Hartford 1, Conn.  
Please send your free Telescope Guide.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

**Super Jet SOLID FUEL BLOWTORCH**

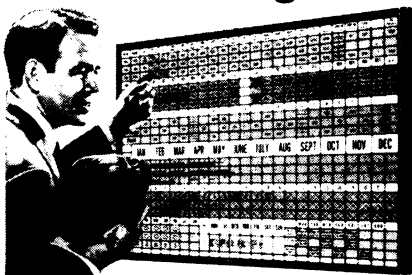
OVER 2000°F.



**NO PREHEATING — STARTS AT ONCE.** You can solder, silver solder, braze, anneal or harden, form glass with this amazing new torch. Non-explosive! FAST, CLEAN and SAFE. Each tablet gives high heat for ten minutes, can be extinguished & relighted. Lifetime guarantee Super Jet and 12 tablets (2-hour supply) with directions. . . . **\$1.99**  
Extra tube of 12 tablets 35¢ plus 10¢ mailing.

**THE BIRK MFG. CO.** Post Paid  
Niantic 515, Connecticut No. C.O.D. please

## How To Get Things Done



### BOARDMASTER VISUAL CONTROL

Your operations are pictured at a glance. You save time, money and prevent mixups by Seeing What is Happening at all times. Ideal for Production, Maintenance, Inventory, Scheduling, Sales, Etc. Easy to Use. You write on cards, snap on metal board. Over 750,000 in Use.

**FREE** 24-Page BOOKLET No. V-40 Mailed Without Obligation  
**GRAPHIC SYSTEMS**  
925 Danville Road • Yanceyville, N.C.

## ENTOMOLOGY

# Cockroach Brain Surgery

► PERFORMING A SERIES of delicate operations on cockroaches may provide basic information on the central nervous system and hormone operation in man.

Dr. R. T. Yamamoto of the U.S. Department of Agriculture removes tiny brain-associated endocrine glands in his study of hormone operation in the female American cockroach.

Although his work at the Insect Physiology Laboratory at Beltsville, Md., is a basic study, Dr. Yamamoto says it may have applications in the understanding of the complex and delicately balanced hormone system in mammals.

When the female cockroach is mature, her endocrine glands instigate the production of a sex attractant. Shortly after mating, the attractant production stops and egg development begins.

Careful surgical removal of this gland, the corpora allata, will stop the attractant production. Juvenile hormones that inhibit the sexual development before the roach is mature will restart the production of attractant after it has been stopped by the removal of the corpora allata.

Dr. Yamamoto is studying the complex system of hormones that stops the production of sex attractant and begins the production of eggs after the female has mated.

He found the changeover is controlled through the central nervous system, possibly through the production of a hormone by the brain. Severing the nerve from the brain to the corpora allata can change the cycle from attractant to ovarian production.

To obtain evidence of the brain's role in this sequence, Dr. Yamamoto and an assistant, D. H. Chen, performed one of the most delicate operations in the entire series of experiments—tying off the tiny nerve from the brain to the corpora allata with

a single silk fiber. They hope to pin down whether the nerve transmits a secretion or an impulse that in effect shuts off the attractant production.

This research is part of an intensive effort to learn details about insects and their habits as a basis for developing effective methods of insect control. The females' ability to attract males and to mate can be controlled if it is known what mechanisms stop the production of the sex attractant.

However, Dr. Yamamoto says this inhibition of reproduction as a pest control would present serious problems in getting the hormone to wild females.

• Science News Letter, 85:174 March 14, 1964

## MEDICINE

### Spinal Effect Not Epidemic, But Chance

► A SPINAL DEFECT in 16 Atlanta babies previously thought to be "epidemic" was reported to be a probable chance happening in the Journal of the American Medical Association, 187:570, 1964.

Drs. Gilbert W. Mellin and Michael Katzenstein of the College of Physicians and Surgeons, Columbia University, said that statistics on 15,333 deliveries followed from 1946 to 1962 show the defect, called meningocele, to be well within the "range of chance."

• Science News Letter, 85:174 March 14, 1964

## Nature Note

Fisher

► ONE OF NATURE'S most fearless mammals is the fisher, a whirlwind fighter.

With its blazing eyes, bristling fur and shrill screams, the fisher kills the porcupine regularly for food, although unlike others he suffers no ill effects from swallowing the barbed quills.

The fisher, scientifically known as *Martes pennanti*, belongs to the marten family and is one of the rarest fur bearers today. Its fur is blackish brown, and one fisher may measure almost four feet from nose to tail.

Ranging from New England northwest across Canada and then south along the West Coast almost as far as San Francisco, the animal is so rare that there is an average of one every hundred square miles.

If you are a night prowler in the woods, you might see this animal that does not hibernate as he races swiftly up and down trees, swims across rapidly flowing rivers or bounds along the ground in the search for food.

The fisher's mating season begins in April, but the young will not be born until 11 months later. The family usually consists of three or four children which do not reach maturity until they are two years old.

• Science News Letter, 85:174 March 14, 1964

## MICRO-ADS

Equipment, supplies and services of special interest to scientists, science teachers and students, science-minded laymen and hobbyists. 25¢ per word, payable in advance. Closing date 3 weeks prior to publication (Saturday).  
SNL, 1719 N St., N.W., Washington, D.C. 20036

ADIRONDACK MOUNTAIN ROCKS AND MINERALS—Suite of 16 study-size, boxed, with description. For students and collectors. Cascade Minerals, Lake Placid, New York. Postpaid \$1.50.

THE AMERICAN HUMANIST ASSOCIATION needs the commitment of those who can suggest rational solutions to modern ethical problems. Literature on request. Humanist House, Dept. SNL-2, Yellow Springs, Ohio.

BINDERS FOR SNL—BUFF-COLORED BUCKRAM. Snap-in metal strips hold 52 copies. \$4.00 pp. 25¢ per word, payable in advance. Science News Letter, 1719 N Street, N.W., Washington, D. C. 20036.

DO TEN 2-SECOND EXERCISES WITHOUT movement! Write Minute-A-Day Isometric, 37 Centuck Station, Yonkers, N. Y. 10710.

GOVERNMENT SURPLUS RADIOS, AIRCRAFT cameras, lenses, snooperscopes. 50 page illustrated catalog 10¢. Meshna, Nahant, Mass.

LIVE SEAHORSES, MARINE SPECIMENS. aquarium supplies. Illustrated catalog 10¢. Marine Life, Dept. 109, P. O. Box 826, Dania, Florida.

MANUSCRIPT EDITING. HARRY HYDE JR., Box 424, Bryn Mawr, Pa.