

Nature Note

Dawn Horse

The little Dawn Horse, *Eohippus*, no larger than a fox, was the ancient ancestor of our stately horses of today. This small creature, living some 60 million years ago, stood only about 11 inches high at the shoulders and had four toes on the front feet and three toes on the hind feet.

Appearing on earth in the Eocene epoch, the "dawn age" of the mammals, *Eohippus* looked little like our horses today. Besides being so tiny and having so many toes, his back was arched and his forelegs were shorter than his hind legs. His neck was short and thick, and his head was blunt, with sharp pointed teeth with which he browsed and tore the vegetation.

These small horses, having neither horns nor claws or canine teeth to protect themselves against their enemies, depended upon crouching and hiding to escape danger, or upon outrunning their predators. Throughout the eons, as marshes and swamps evolved and gave way to more grasslands and forests, the horses went through evolu-

tionary changes. They became larger and heavier, and their center toes grew larger, while the outside toes became smaller. Horses of today, classified as Equidae of the odd-toed hoofed mammals of the order Perissodactyla, have only one enlarged "toe" or hoof, well adapted for fast running.

The history of the horse's evolution throughout the ages has been obscure, and scientists have tried to trace the lineage through studies of fossils. *Eohippus* seems to have appeared simultaneously in Europe and America, scientists believe. The European horses died out, but were restocked by migrating horses from Asia, which in turn may have migrated from North America across the Alaska-Siberia land bridge. The little horse in America continued to flourish until the Pleistocene epoch or Ice Age—but by 10,000 years ago, they had all migrated or "disappeared" somehow from this continent, according to carbon 14 dating. Today's modern American horses are descendants of those brought by Spanish explorers.

LETTERS

To the Editor

An Inventor Reacts

Dear Sir:

The featured report "Brain drain: the sound and the fury" (SN: 3/18) should not cause any nation serious concern.

New industry is created by inventors; and most engineers and scientists are not inventors. As a matter of fact, the April 1963 issue of the *AMERICAN ENGINEER* mentions the very poor patent productivity record of the National Science Foundation's grants and fellowships in the article "To-day's Inventor—A Study In Frustration"; and the letter "On the Mass Education of Scientists" in the July 1958 Proceedings of the IRE enumerates some of the reasons.

Why don't the complaining governments advertise and invite dissatisfied American inventors with records of technological accomplishment to develop new industry in their countries? The gratifying results would more than compensate the complaining governments for all of the engineers and scientists who emigrated from their countries, and would also tend to promote peaceful international relations.

Harry Bricker Fuchs
Farmingdale, N.Y.

Grand Canyon

Dear Sir:

Concerning the Grand Canyon article in your Feb. 11, 1967 issue, it is magazines like yours that help make the public aware of impending projects in Congress that might destroy our natural heritage.

Keep up the good work.

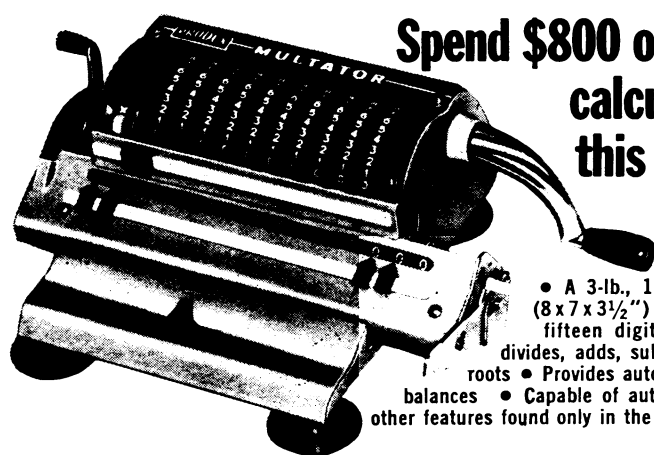
Kenneth Light
Co-President, Grand Canyoners
East Meadow, N.Y.

Science and the Draft

Dear Sir:

I would like to express my agreement with Mrs. Vetter in "Science Defers Under the Gun" (SN: 3/18). Being an undergraduate student in physics, I share the belief that a two-year interruption in the educational sequence would be deadly. I find review necessary during the summer vacation. If I had to put equations aside for a two-year period, it would be necessary to re-learn a great deal of material.

The National Advisory Commission
(See page 389)



Spend \$800 on an electric calculator or buy this \$89 German machine

- A 3-lb., 15-oz. portable mastermind (8 x 7 x 3 1/2")
- Ten-digit keyboard—fifteen digit read-out
- Multiplies, divides, adds, subtracts
- Extracts square roots
- Provides automatic read-out of negative balances
- Capable of automatic re-entry
- Many other features found only in the most expensive calculators

There are basically just two kinds of calculators that make economic sense. If you can keep one of those \$800 electric machines whirring a good part of every working day then anything less is no bargain. But if you are a businessman, engineer, a shipping clerk or plant foreman (who figures bids and such), a doctor, storekeeper — anyone who spends even 30-minutes a day writing figures on paper — then this last word from Germany can definitely save you expensive time and costly mistakes, without making a major capital investment. The MULTATOR-4 not only multiplies and divides at a brisk clip, but it can perform tricks only a few of those very expensive machines have been taught: such as automatic re-entry* and read-out of negative balances (book-keepers take note!). This compact wizard from Hamburg naturally extracts square roots, but then, quite a few of those expensive machines can do that also.

Buy a calculator by mail? Sight Unseen? It may be unorthodox, but it is the only way to buy the MULTATOR-4, and to buy it for \$89. Because we are the only link between the manufacturer and you (the exclusive importer/retailer), you save the usual distributor/dealer/salesman markup.

Our Guarantee: It's simple. You may return the MULTATOR-4, for whatever reason (or for no reason at all) within two weeks. After that, the Guarantee covers material and workmanship for a full year. Needless to say, we maintain a complete spare part and repair service.

SAVE TIME. AVOID ERRORS. ORDER THE MULTATOR-4 FOR A TWO-WEEK TRIAL.

Mail to: HAVERHILL'S
526 Washington St., San Francisco, California 94111

- ☐ Please send me the Multator-4 (\$89.00 plus \$2.00 for postage and insurance).
- ☐ Please send me the carrying case (metal faced vinyl, foam lined), \$10.00.
- ☐ My check is enclosed.
- ☐ Bill Amer. Express Acct. # _____ (California residents add 4% sales tax)

Name _____
Address _____
Zip _____

SN-0422 © 1965,

Haverhill's

Searching the World to bring you the Finest