

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.

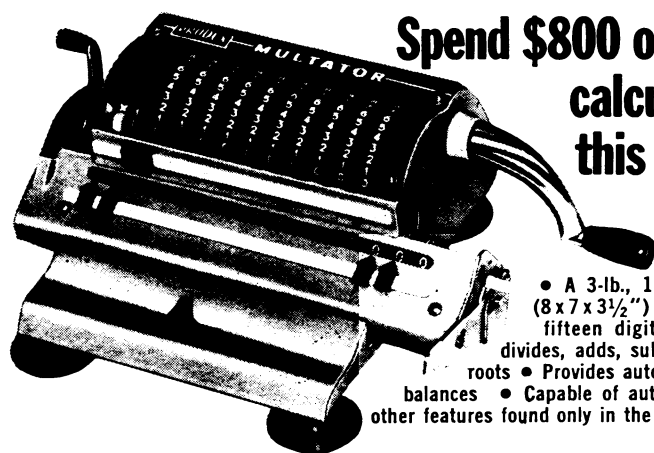
Kenneth Light
Co-President, Grand Canyoners
East Meadow, N.Y.

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)



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Letters (continued)

on Selective Service, if its recommendations are accepted, may achieve fairness; but fairness alone is not going to maintain American military strength. Such a plan as proposed would severely limit the number of new scientists for four or five years after its enactment. The number of scientists seems to me to be at least as important as the size of the military establishment.

Michael Grote
Miami University
Oxford, Ohio

Unbalanced or Courageous?

Dear Sir:

I enjoyed Barbara Tufty's article on Dr. Leakey as well as others she has written in SCIENCE NEWS.

I did question and was very much surprised by this great man's statement about—"the psychologically unbalanced youths who burn their draft cards." Since the draft card burners are most courageous and most humanistic and serious of our young people today, this statement by Dr. Leakey is amazing. I think that they prove his contention about this new era of the youth—that they will make great changes.

I have limited time for reading, but find that I am able to peruse SCIENCE NEWS and read many of the articles. I like to keep up-to-date in this easy-reading fashion.

Mrs. Emil Bardach
West Orange, N.J.

Disbelief

Gentlemen:

I have just re-read Barbara Tufty's beautiful article, "Christmas Crystals," in your issue of Dec. 11, 1965, and noticed a statement in it which I have heard often before but never before have seen in a scientific magazine.

The statement I refer to is that no two snowflakes are alike. I wish to challenge that statement on two bases:

1. To prove that no two snowflakes are alike it would be necessary to photograph every snowflake that has ever fallen, a clear impossibility.

2. So many snowflakes have fallen since the world first cooled enough for frozen precipitation that it seems mathematically impossible that no two of them were alike.

Mrs. Arnet Cole
Adrian, Mich.

(Mrs. Cole estimates that more than 240 billion flakes fall in a 3-inch snowfall over a square mile.)

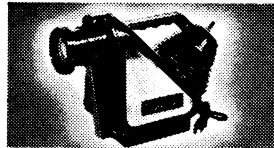
(See page 390)

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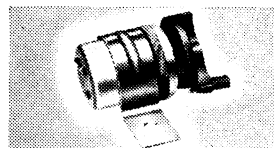
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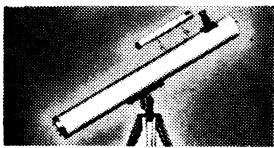
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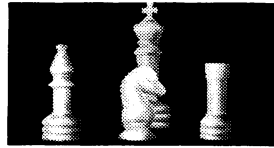
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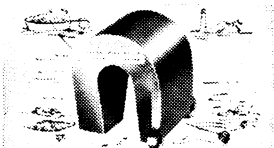
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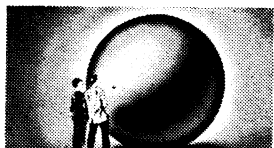
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