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Editorial and Business Offices
1719 N Street, N.W.
Washington, D.C. 20036

Subscription Department
231 West Center Street
Marion, Ohio 43302

Subscription rate: 1 yr., \$22.50; 2 yrs., \$39.00; 3 yrs., \$55.00. (Add \$3 a year for Canada and Mexico, \$4 for all other countries.) 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

FEBRUARY 13, 1982

LETTERS

Amateur astronomers unite

I am compelled to reply to the statements made in ignorance by Mr. Mulholland concerning amateur astronomy (SN: 1/9/82, p. 19). First off, amateur astronomers today do not do "trivial" astronomy. The adjective trivial is certainly not suitable for the science of astronomy, no matter what context it is used in. Second, many of today's amateurs, though not a majority, employ telescopes, computers, photoelectric photometers, filar micrometers and other devices that are "suitable" for serious research. In fact, many small colleges and astronomy departments would be happy to have many of the instruments owned by some amateurs.

Third, there are fields in astronomy that depend entirely or partially on the data collected by amateurs. Groups such as the AAVSO (variable star observers) have contributed much to astronomy during this century. Over 4 million star measurements of variables of high quality such as ALPO, IOTA and the IAPPP (Association of Lunar and Planetary Observers, International Occultation Timing Association and International Amateur-Professional Photoelectric Photometry) have and will continue to give strong support and supply much needed observations for the professional astronomers.

Many observatories employ amateurs as observers or to assist on other projects. At Allegheny Observatory, no less than seven amateurs work as part-time observers on the Thaw Refractor. Mr. Mulholland should also remember that Clyde Tombaugh was an amateur astronomer before he was employed at Lowell Observatory. Though he is well known for his discovery of Pluto, there are others who have discovered comets, novae, meteor showers and one amateur in California discovered eight galaxies with a sixteen-inch telescope.

I could continue for many more pages on this subject, but I will finish with two final points. I work at Allegheny Observatory as an assistant astronomer and assistant senior observer. I do not have a degree in the field of astronomy, but some would consider me a professional because I am paid. Others still consider me an amateur because I do not possess a Ph.D. My experience as an amateur put me in my current position and I am proud to be called an amateur astronomer and I am proud to be associated with this fine group of people.

Finally, I am deeply offended by Mr. Mulholland's degrading remarks in his letter and his total lack of knowledge of the thousands of amateurs contributing to astronomy today. He owes us all an apology.

He and your readers should read P. Clay Sherrod's *A Complete Manual of Amateur Astronomy* to learn what contributions are being made by amateurs.

Tom Reiland
Pittsburgh, Pa.

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I must disagree strongly with Mr. J. Derral Mulholland of Austin, Tex. Seth Carlo Chandler was definitely an amateur astronomer. Many amateur astronomers do much more than trivial astronomy, in much more than their spare time and with equipment that is frequently more suitable for serious research than is available to some professionals. As a member of the "Amateur Astronomers Association of Pittsburgh," affiliated with the "National Academy of Arts and Science," I know a number of amateur astronomers in this category. As for myself, I designed and built the largest privately owned astronomical telescope in the U.S., and a well-equipped observatory that served as an Official Moonwatch Station throughout the entire space program. I have a file cabinet full of reports and results of my participation.

After a dozen years as an amateur, I became a professional astronomer only when a large space oriented corporation put me on its payroll. Despite the \$20,000 I had invested in my observatory (no labor cost included), my employment application read, "amateur astronomer, with extensive background in personal and NASA connected projects."

Rody J. Clutter
Pittsburgh, Pa.

Not biologically bashful

In reference to the article "Sources of Temperament: Bashful at Birth?" (SN: 1/16/82, p. 36), Kagan alludes to a "biological tendency" toward extreme bashfulness, linked to higher stable heart rates in place by the age of 21 months. From the description presented I would suggest rejecting, over protective parenting habits as a more probable cause than biological propensity. Twenty-one months is long enough to form a basic personality and underlying apprehensive world view. Rohner's worldwide study of parental acceptance and rejection has a great deal more heuristic value. From a sociobiological viewpoint what genetic value would timidity have for Homo sapiens? Suomi's work does not seem to recognize the effect of postnatal environment either. Mothering behavior is learned behavior in primates. There may be prenatal effects but the postnatal environment is not discussed to any effect. Seligmann's and Maier's "learned helplessness" and "frustration" theories would provide correlating explanations with a more powerful valence than the biological explanation.

Glenn J. Morris, Ph.D.
Hillsdale, Mich.

Plain speaking

I have been enjoying your magazine for several years and have had little trouble understanding the articles, with one exception: Whenever development of weapons is referred to it is referred to under the code name of defense. Let us call a spade a spade and weapons development as such.

Gaylord Holder
Arlington, Va.