were *Lucilia sericata* and *Phormia regina*. The Lucilias were started by the capture of a single female fly which deposited a small cluster of eggs, thus producing the first cage of stock. These related individuals were then inbred to continue the culture. The Phormias were established three months later. From this original stock, material was transferred to our laboratory at the Ohio State University in October, 1930, and have been maintained by inbreeding continuously ever since.

Among the early problems that had to be settled were those of food and rearing, such as failure to pupate and the loss of adult flies from bloating. After trying many foods such as fruits and fruit juices, honey and sugar solutions, and a wide variety of meats for both the adults and maggots, the following simple foods were chosen.[1] Adults were fed lean beef, which was essential to egg development in females, and brick sugar. Fresh tap water was supplied at all times. The maggots were fed fresh hamburger. No other food has been used over a period of eight years. The cultures have flourished and selective measures seem to have eliminated the rearing difficulties mentioned. The flies have been very useful for research on osteomyelitis, insect physiology, insecticide testing and as class material.

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SPONTANEOUS ACTIVITY OF THE SPINAL TADPOLES OF THE FROG AND THE TOAD

IN connection with our work on the development of swimming and righting reflexes in the tadpoles of the frog (*Rana guentheri*) and the toad (*Bufo bufo asiaticus*) and the effects thereon of the transection of the central nervous system at different levels about the time of hatching, we were surprised to find that spinal tadpoles show spontaneous activity. This is entirely contrary to what is observed in spinal frogs and toads, which hardly ever make any movement when not externally stimulated.

Decapitated tadpoles, tadpoles with only a small caudal fragment of the spinal cord intact, all move about without any noticeable external stimulation. These spontaneous movements come periodically—occurring every five to ten minutes, or every twenty to thirty minutes, or one to one and a half hours. The active period lasts from one second to one minute. Lack of suitable recording instruments prevented us from taking some accurate continuous records of this spontaneous motility from the time after operation to the time of the death of the animal.

Further destruction of the remaining spinal cord abolishes the spontaneous activity.

It is extremely difficult to rear these spinal specimens, and therefore it is not as yet possible to ascertain whether they still show spontaneous motility after metamorphosis.

This striking difference in the behavior of the tadpole and the adult form of the frog and the toad after the removal of the brain leads us to ask how it comes about. Might not the spinal centers of the adult have become so accustomed to take orders from the higher centers that they lose their own initiative?

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THE CASE HISTORY OF A SCIENTIFIC NEWS STORY

ON August 21, 1937, the United States National Museum published a bulletin written by me and entitled "The Fort Union of the Crazy Mountain Field, Montana, and Its Mammalian Faunas." Highly technical in character, this publication of 287 pages describes the geology and paleontology of Middle and Upper Paleocene strata in central Montana. As is their custom, the officials of that museum released to the press a non-technical résumé of this publication. The release was submitted to me for approval and was issued only after revision seemed to leave no possible false impression. It was a rigidly correct and yet easily comprehensible summary carefully avoiding any sensational claims or mis-statements. My own institution, the American Museum of Natural History, was mentioned in the story and its clipping service sent in versions of this story as it appeared in ninety-three different papers from Maine to California and from the Great Lakes to the Gulf of Mexico.

Six papers, from such cities as Worcester, Mass., and Butte, Montana, published the release almost exactly as it was written. Less than one fourth of this version refers to the oldest known primates, included in the faunas described in the bulletin. The bulletin and the original release emphasize that these are not in a direct line of modern primates or man, but that they are very ancient representatives of the same broad group of mammals. They also point out that it was not I who discovered these ancient primates. Even in the reprints of the whole release a few errors crept in, among them a statement that the fossils in question are 70,000,000 years old, a considerable exaggeration. The headlines were innocuous, although the Butte, Montana *Standard* spread across three columns "Montana's Crazy Mountains Listed as Cradle of Animal Life to Which Man Belongs," which escapes falsity largely by being nonsensical.

The sedate *New York Times* rewrote the story as a

[1] James Godfrey Haub and David Franklin Miller, *Jour. Exp. Zool.*, 64: 52–55, November 5, 1932.

"special," and their version appeared without much change in twenty-nine newspapers. This was a skillful and generally accurate condensation of the original press release to about a third of its original length. The text of this dispatch carefully points out that the primates discussed are not ancestral to living primates or to man, and yet the *Times'* own headline was "Man 'Traced' Back 70,000,000 Years," and the other papers all followed suit, with even less restraint. This story, too, refers to 70,000,000 years, although in a later paragraph it gives the much lower figure that I really authorized. Writing a special article for the *Washington Star,* Mr. Thomas R. Henry was irked even by the larger figure and changed it to "seventy or eighty million years ago," presumably on his own authority.

The Associated Press used the release as basis for a rewritten and much modified dispatch that appeared in thirty-four papers. The tone of this is set by its first sentence: "Man, instead of having descended from the monkey, probably ascended from a four-inch long, tree-dwelling animal which was the ancient granddaddy of all mammals on earth to-day." It went on to suggest that I held that man might have originated in the western United States rather than in Asia. It may not be necessary to insist that I have never made and do not believe any such statements as these or others of less importance in the same dispatch. The headline writers outdid themselves on this version of the story:

Monkey Father of Man? Nope, a Mouse.—Sacramento, Calif., *Union.*

4-inch Fossil Seen as Daddy of All Mammals.—Richmond, Va., *Times-Dispatch.*

Four-Inch Tree Animal Seen as Man's Ancestor.—Shreveport, La., *Times.*

Here's New Kind of Monkey Story.—Lynchburg, Va., *Advance.*

Study of Mammals Brings about New Evolution Theory.—Newport News, Va., *Press.*

Western U. S. Now Held to be Man's Birthplace.—Tacoma, Wash., *Ledger.*

The United Press dispatch, appearing in some cases with Mr. Hillier Krieghbaum's by-line, has been clipped from twelve papers. This story, happily for me, steered clear of the subject of man's ancestry and emphasized the survival of mammals after the dinosaurs became extinct. The story is well written, reasonably accurate, and interesting, so that it would be ungrateful to insist too much on the fact that it has very little to do with the particular research to which it refers. There is not much snappy headline material here, and the best, or worst, they could do was "Mice of 70,000,000 Years Ago Outlast the Dinosaurs." Incidentally, the recurrent theme of rats and mice in these various versions is the result of saying that some of these early mammals were as small as rats and mice. Of course they were not rats or mice, nor was such a statement made in the original release.

Mr. David Dietz, the Scripps-Howard science editor, made by far the best condensation and rewrite of the story, giving a good idea of the essential meaning of the work and a brief but fair summary of its results. Unfortunately, this account appeared in only two newspapers, as far as our clippings show. The New York *World-Telegram* headed the story chastely "Primeval Life in America." *Science Service,* quoted by four papers, also produced a reasonable account, although one slightly less accurate and much less enlightening than that by Mr. Dietz.

Only four papers seem to have written their own unsyndicated accounts. Apparently these were based without credit on the garbled Associated Press version, which of course they garbled still farther. Two of them, like several that used credited press services, have me discovering the missing link. A story in the Philadelphia *Record* contains just four sentences, not one of which is even roughly true, either as scientific statement or as the quotation from me that it purports to be. Unfortunately, they did spell my name correctly, so that it is clearly I who am represented as "clambering about man's family tree" whence I announce that a "tiny rat is latest ancestor of man."

This furore died down in October, 1937, and I sighed in relief and set about trying to live down the newspapers' ideas of what I had said. Then on April 18, 1938, the Gloversville, N. Y., *Leader* published an account of the Mohawk Valley Kennel Club's show in the course of which they gave me (under a wrong but all too recognizable name) as authority for the existence 70,000,000 years ago in Montana of dogs as large as Kodiak bears. Then another town had a dog show, and this time it appeared that I had not only discovered such dogs but had described sixty different species of them. This is appalling fertility of imagination, for the original release contained no mention whatever of the discovery of dogs, whether as large as Kodiak bears or as small as mice. Dog fanciers and newspaper exchanges being what they are, I subsequently enjoyed another period of fame, this time as the discoverer of the great, 70,000,000 year old Kodiak-bear-dogs, which no more existed and which are no more my invention than the rats ancestral to man. Years after the original press release, this truly ridiculous story is still occasionally appearing.

For some time I received letters from all over the country, all beginning in essence "I see by the papers where you say—" and then going on to vilify or, less commonly, to praise me for things that I never have said and never would say. These letters have little to do with the case, but they do show that people were

interested and in many cases excited by the newspaper accounts. This is hopeful, because it suggests that even the truth might have interested them had the press seen fit to make it available.

Out of nearly one hundred papers whose stories finally came back to me, about one tenth had reports that were neither seriously wrong scientifically nor obnoxious to me personally. In view of the great need for popular presentation of the results of research, and in view of the mechanisms set up for this purpose and used in this case, this is a serious matter despite its humorous side. It is fairly typical of what still happens to scientific news, and it has a moral, in fact several of them, that will be obvious to the reader.

G. G. SIMPSON
THE AMERICAN MUSEUM OF NATURAL HISTORY

SOCIETIES AND MEETINGS

THE EASTERN SECTION OF THE SEISMOLOGICAL SOCIETY OF AMERICA

THE Eastern Section of the Seismological Society of America held its fifteenth annual meeting on May 31 and June 1, 1940, at Xavier University, Cincinnati, Ohio. The sessions were well attended, and all the prominent seismological observatories of the United States westward to the Mississippi Valley were represented; on account of the international situation, the Canadian seismologists did not attend. The members and guests of the section were welcomed by the Reverend Dennis Burns, S.J., president of Xavier University, and by the Reverend V. C. Stechschulte, S.J., director of the Xavier seismic station.

Professor Arthur C. Ruge, of the Massachusetts Institute of Technology, chairman of the section, presided at the four sessions during which the business of the section was transacted and the scientific papers were presented. Detailed reports were given on "Amateur Seismology" by J. J. Lynch, S.J., of Fordham University, and on "Methods and Operations" by E. L. Perry, of Williams College; these reports aroused much interest and discussion; it is hoped that they may be made available in printed form for distribution. The report of E. A. Hodgson, of the Dominion Observatory at Ottawa, on "Vault Construction" was read by title because of his enforced absence; however, the detailed report has since been mailed by the observatory to all seismic stations; it constitutes the most authoritative and up-to-date source of information that we have on the subject.

Twenty-two papers were presented on a variety of topics in theoretical and instrumental seismology. Captain N. H. Heck, of the U. S. Coast and Geodetic Survey, discussed recent developments in strong motion recording and showed excellent records of the Imperial Valley earthquake which had occurred a few days before the meeting; he gave interesting details of the effect of the European war on international scientific societies. Other papers of particular interest were: "Observations of Microseisms at Spring Hill College, Alabama," by A. J. Westland, S.J., and C. J. Elliot, S.J., of Spring Hill College; "The Earthquake Analyzer," by Arthur C. Ruge, of the Massachusetts Institute of Technology; and "A 'Synchronous Direct Current Motor' for Seismograph Recorders," by J. H. Nelson, of the U. S. Coast and Geodetic Survey. Two topics were discussed at length by the entire section; H. E. McComb, of the U. S. Coast and Geodetic Survey, led the discussion on "Instruments," and J. B. Macelwane, S.J., led that on "Seismic Prospecting." The leaders had prepared carefully questions and arguments on theoretical and practical aspects of seismology that provoked extended and at times heated debate.

The following officers were elected unanimously for next year: *Chairman,* A. J. Westland, S.J., Spring Hill College; *Vice-Chairman,* R. R. Bodle, U. S. Coast and Geodetic Survey; *Secretary,* W. A. Lynch, Fordham University; *Treasurer,* H. Landsberg, Pennsylvania State College; *Fifth Member of the Executive Committee,* A. C. Ruge, Massachusetts Institute of Technology. An important resolution was adopted requesting the Electric Utilities of the United States to aim at closer frequency control to assist observatories and other scientific bodies in making time measurements.

An excellent luncheon served on Saturday by Xavier University provided a fitting close to a thoroughly enjoyable and instructive meeting.

WILLIAM A. LYNCH,
Secretary
FORDHAM UNIVERSITY

THE BOTANICAL CONFERENCE AND FORAY AT THE ALLEGANY SCHOOL OF NATURAL HISTORY

A TOTAL of eighty naturalists participated in the botanical forays held at the Allegany School of Natural History over the week-end of June 21–23. The following societies were represented: Botanical Society of America, American Society of Plant Taxonomists, Torrey Botanical Club, Burroughs-Audubon Club of Rochester, Nature Sanctuary Society of Western New York, Western Pennsylvania Botanical Club and Sullivant Moss Society. The conference attracted botanists from a widely scattered area, including South Dakota, Wisconsin, Ohio, Tennessee, Pennsylvania, New York, New Jersey and Massachusetts.