fessor Barker was born in Ottawa, Kansas, on September 16, 1877; he received his A.B. degree from Ottawa University in 1898 and two years later the same institution conferred on him the master's degree. In 1910 the University of Nebraska conferred on him the degree of doctor of philosophy. At various times during his early career he was a fellow at Harvard University and also an assistant at the University of Chicago. Because of his interest in parasitology, he spent some time in Bermuda and the Harpswell Laboratories pursuing his studies. Professor Barker's papers were characterized by meticulous care and rigid adherence to the criteria of sound work. For many years he was an associate editor of the *Journal of Parasitology.*

For many years Professor Barker served on the faculty of the University of Nebraska, where he devoted his exceptional executive ability to the directing of premedical studies. He was called to Northwestern University in 1926. His career there has been marked by a sound and extensive growth of the influence of the department, both on and off the campus. Always keenly interested in students, his patience in assisting them to solve their problems and his sound advice in shaping their careers have given him an influence over young people that will persist.

In his personal attributes, Professor Barker was genial, sympathetic, but maintained a reserve which commanded the respect of his students. His colleagues at Northwestern University wish by this note to record their sense of loss.

CORRESPONDENT

JOHN J. SCHOONHOVEN

JOHN J. SCHOONHOVEN, fellow of the American Association for the Advancement of Science, instructor in education at New York University, died after a week's illness in New York on June 27. In his passing New York University lost one of its most beloved instructors in the field of science. He conducted courses in bio-chemistry, micro-biology and in physiology in its special application to the problem of physical education. In the summer graduate school on Lake Sebago he taught not only science but courses in general nature study.

He was a lecturer on scientific subjects and a member of the Royal Microscopical Society of London. He had done special research in parasitology.

He held membership in many scientific societies and for years was president of the department of zoology of the Brooklyn Institute of Arts and Sciences, of which institution he was a fellow and a member of the council.

He was a scholar and a gentleman in the full meaning of these now old-fashioned terms. He was keen, alert and full of the joy of living. He leaves a large circle of friends who loved and admired him for his sincerity, his charm, his keen sense of humor as well as the wide range of his scholarly interests. Among these are many young men who are already achieving eminence in their respective fields who were inspired and helped by his understanding and vision.

He is survived by his widow, formerly an instructor in the University of Illinois and long associated with the Brooklyn Children's Museum.

S. N. L.

RECENT DEATHS

DR. HENRY SEWALL, emeritus professor of physiology at the School of Medicine of the University of Colorado in Denver, died on July 8, at the age of eighty-one years.

DR. GEORGE C. SHAAD, dean of engineering and architecture at the University of Kansas, died on July 9 at the age of fifty-eight years.

DR. RUFUS B. WEAVER, professor emeritus of anatomy at Hahnemann Medical College, of the faculty of which he had been a member for sixty-one years, died on July 15, at the age of ninety-five years.

DR. WILLIAM JAMES STEWART LOCKYER, astronomer and director of the Norman Lockyer Observatory on Salcombe Hill in Devonshire, England, died on July 17. He was sixty-eight years old.

SIR WILLIAM HEATON HAMER, formerly medical officer of health and school medical officer for the Administrative County of London, died on July 7, at the age of seventy-four years.

DR. A. P. KARPINSKY, geologist and paleontologist, since 1916 president of the Soviet Russia Academy of Sciences, died on July 14, at the age of ninety years.

SCIENTIFIC EVENTS

A NEW BRITISH SURVEY SHIP

ACCORDING to the London *Times* a non-ferrous survey ship, the *Research,* is being fitted out and will probably start work in the Southern Indian Ocean. The program mapped out for the ship includes investigation of atmospheric electricity, determination of the earth's magnetism at sea, meteorology, deep-sea sounding by the latest Admiralty pattern deep-water echo-sounding machine and, possibly, marine biology. For these purposes she is to be fitted with a wide range of special instruments which embody the latest results of scientific research.

One of these scientific instruments is a collimating compass for determining magnetic declination or compass variation at sea. In using this instrument one looks through one of four magnifying windows in the wall of the compass bowl and sees the nine degree divisions reflected from the corresponding concave mirror as though these divisions were on the horizon exactly magnetic north, south, east or west, according to the scale used. Just as the navigator measures an altitude of the sun above the horizon with a sextant, so the observer measures with a sextant the angular distance of the sun from the middle division of a scale. If the sun is just rising or just setting the angular distance measured is the magnetic bearing counted from one of the cardinal points of the compass, and this magnetic bearing compared with the astronomic bearing gives the variation of the compass. If the observation is made after sunrise or before sunset the measured angle is reduced to a horizontal angle. At the same instant another observer measures the sun's altitude for this purpose.

Another of the instruments is a deflector for determining magnetic density at sea. This is used to measure the strength of the earth's magnetic field in a horizontal plane—in other words, to determine the force that pulls or holds the compass card in its normal position with the north point towards the magnetic north. This is done by balancing the earth's horizontal field against another magnetic field for which a magnet of known strength is used. The deflector is a compass fitted with standards, or stirrups, to hold the magnet of known strength at different distances above or below the deflector compass card. Suppose the ship is heading due north by compass, the deflector will then read zero. If one of the magnets is placed with its north end east in the uppermost stirrup, then the north end of this magnet repels the north end of the card and attracts the south end, while its south end repels the south end of the card and attracts the north, all operating to turn the card from north, or zero, reading to westward; the card will turn westward until the earth's field prevents further turning. It is then balanced by the earth's field and known field of the magnet, and the angle that it has been turned through away from its natural position is a measure of the earth's horizontal field. The relation of the angular measure thus obtained and the earth's actual field expressed in the usual centimeter—gram—second units is determined on land by comparisons with standard magnetic instruments.

A third of the instruments is the marine earth-inductor for determining inclination at sea. This is used to measure the magnetic inclination or dip. It consists essentially of a coil that may be rotated at a constant speed and will generate an electric current when connected with a galvanometer in the control house. If the axis of rotation of the coil be set in the magnetic meridian and inclined so as to coincide with the direction of the earth's field, the sensitive galvanometer indicates no current and the vertical circle of the instrument will give the angle of inclination or dip. In actual practice at sea it is not possible to make the axis of rotation coincide with the direction of the earth's field, but by reading first on one side and then on the other the true direction may be computed from the relative magnitudes of the small currents.

GRANTS OF THE GEOLOGICAL SOCIETY OF AMERICA

THE following grants, supporting special research projects, have been approved by the council of the Geological Society of America:

Arthur Keith, Washington, D. C. Grant of $700 to cover field expenses in study of the folded belt of the Appalachians in the Province of Quebec. This investigation was supported in 1935.

H. R. Wanless, Urbana, Ill. Grant of $480 to cover field expenses in study of correlations in the Pennsylvanian of the eastern interior and Appalachian coal fields. This investigation was supported in 1935.

J. Brookes Knight, Princeton, N. J. Grant of $500 for traveling and office expenses in completion of the study of types of general of Paleozoic gastropods begun in Europe in 1934–1935.

M. A. Peacock, Cambridge, Mass. Grant of $250 for typing and drafting in completion of "Geology and Petrology in Iceland."

Carroll Lane Fenton and Mildred Adams Fenton, West Liberty, Iowa. Grant of $540 to cover field and laboratory expenses in study of selected calcareous algae and stromatolites.

Francis P. Shepard, Urbana, Ill. Grant of $500 for traveling expenses in study of submarine canyons.

Evans B. Mayo, Ithaca, N. Y. Grant of $1,200 for traveling and field expenses in a structural study of parts of the southern Sierra Nevada, California.

Andrew H. McNair, Hanover, N. H. Grant of $200 for traveling, field and laboratory expenses in study of Upper Devonian Bryozoa.

L. C. Glenn, Nashville, Tenn. Grant of $350 for traveling and field expenses in an examination of the banks of the Intracoastal Canal between Southport, N. C. and Waccamaw River, S. C.

Ralph W. Imlay, Ann Arbor, Mich. Grant of $450 for traveling and field expenses in study and collecting at type localities of faunas described from northern Mexico. This investigation was supported in 1933, 1934 and 1935.

R. S. Lull, New Haven, Conn. Grant of $1,000 to provide an assistant in the completion of a manuscript on the ornithopod dinosaurs.

W. P. Popenoe, Pasadena, Calif. Grant of $800 for field and laboratory expenses in detailed stratigraphic and