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THE ORIGIN OF RADAR—Robert Morris Page—*Doubleday*, 197 p., illus., photographs, paper, 95¢. A readable text on the discovery and development of radar to its present applications in navigation, weather forecasting, astronomy, automation and other technical fields.

PESTICIDE HANDBOOK, 1962—Donald E. H. Frear, Ed.—*College Science Pubs.*, 14th ed., 303 p., \$3.50; paper, \$2.50. Contains 9,444 commercial pesticide products.

PHYSICS AND ASTRONOMY OF THE MOON—Zdenek Kopal, Ed.—*Academic Press*, 538 p., illus., \$16.50. Authoritative discussions of the dynamics of the moon, its interaction with the earth, analysis of the light of the moon, lunar topography and charting, interpretation of lunar craters, radio observations, and origin of the moon.

PROGRAMS, '62: A Guide to Programed Instruction Materials Available to Educators by September 1962—Center for Programed Instruction—*GPO*, 383 p., illus., paper, \$1.50. Annotated bibliography of 122 ready programs with sample pages and statistical summary.

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PUFFINS—R. M. Lockley—*Doubleday*, 222 p., photographs, paper, \$1.25. A study of the habits, behavior and social life of the gregarious North Atlantic "seaparrot".

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VALENCE—C. A. Coulson—*Oxford*, 2nd ed., 404 p., diagrams, \$6. Contains undated account of d-electrons, theory of inorganic chemistry, and ligand-field theory and complex ions.

VOLCANOES IN ACTION: Science and Legend—Lynn and Gray Poole—*McGraw*, 79 p., illus. by Gustav Schrotter, photographs, \$3. For boys and girls.

THE WAVE MECHANICS OF ELECTRONS IN METALS—Stanley Raimis—*Interscience (Wiley)*, 367 p., \$13. Treatment is mathematical, with emphasis on the interaction of electrons and the calculation of energies.

THE WONDER THAT IS YOU—Charles Gramet—*Abelard-Schuman*, 62 p., illus. by William Burnard, \$2.95. Science teacher explains to children the marvellous machines their bodies are.

WONDERS OF ANIMAL DISGUISES—Sigmund A. Lavine—*Dodd*, 63 p., illus. by Margaret Cosgrove, \$3. Informative book about mimicry for young people.

YOUR CHILD FROM 1 TO 6—*Childrens Bureau (GPO)*, 8th rev. ed., 97 p., illus., paper, 20¢. Popular pamphlet for parents, brought up to date.

• Science News Letter, 81:348 June 2, 1962

ZOOLOGY

Animal Believed Extinct Found Alive in Ocean

► AN EXTINCT MARINE animal has been found alive, providing a living link between starfishes and sea-lilies, according to a leading expert on oceanic animals.

Detective work on a 100-year-old laboratory specimen from the little-known group of somasteroids, believed extinct for 400,000,000 years, resulted in the discovery. Although relatively abundant in ancient seas, they lacked solid outside skeletons and were poorly preserved.

A century ago an English scientist found some starfish-like animals living in the shallow coastal waters of Central America. He thought they were a newer type of starfish.

Dr. H. Barraclough Fell, professor of zoology at Victoria University of Wellington, New Zealand, after studying some of these animals, showed that they were actually descendants of the somasteroids, related to both the starfishes and crinoids, the stalked sea-lilies.

Until now, these two groups of ocean animals have been separated, with no evidence that they were related, Dr. Fell reported in *Science*, 136:633, 1962. The theories have been based on the tiny swimming larval stages of the animals, not on the structures or remains of adults.

Dr. Fell found that the remains of the arms were clearly related to many starfishes. He dissected the skeleton of the first specimen found, which has been kept in the British Museum in London.

The position and pattern of parts of the arm and other structures were very similar to the fossil somasteroids.

A mistake in classification has clearly been made, he pointed out. The somasteroid descended from crinoids, not from the starfish, and are probably the ancestors of starfish. They are not extinct, as has been thought, for somasteroids are still being dredged up from the shallow Pacific waters.

These four- or five-inch, star-shaped animals are violet colored in life, almost flat and resemble a cardboard cut-out. They offer a challenge to fossil experts since they may now be studied while alive and intact.

• Science News Letter, 81:349 June 2, 1962

Questions

MEDICINE—How many times a second does man's body vibrate throughout his life? p. 345.

OTOLOGY—What types of injury to the ear result from tobacco smoking? p. 347.

ZOOLOGY—What animal is believed to be the ancestor of the starfish? p. 349.

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