with periods of 7–8 days, and we must take into account possible solar influences geared to the solar rotation with a periodicity of about 27–28 days.

This list of points is by no means complete, but it is sufficient to show the difficulties encountered if the attempt is made to investigate lunar influences upon the weather. Very elaborate statistical procedures must be employed before even preliminary results of sufficient significance can be obtained. For this reason the results and implications of Mr. Henstock's paper are not acceptable. In general, meteorologists still agree that lunar influences upon meteorological elements other than the tidal waves—which are extremely small—have not been adequately demonstrated. Many papers have been published alleging to show such influences, but up to now none has held up under a careful and unbiased scrutiny.

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Book Reviews

The Genetics of the Dog. Marca Burns. Farnham Royal, Bucks, Eng.: Commonwealth Agricultural Bureaux, 1952. 122 pp. and plates. 12s 6d.

Marca Burns is a geneticist as well as a dog breeder, and this little book amply proves the connection. It contains a digest of the world's technical studies of dog genetics, yet is written for the layman with a background of college biology.

Chapters on Mendelian theory, reproduction, conformation, physiological peculiarities, abnormalities and disease, behavior and mental attributes, coat, skin, and color, together with three helpful chapters on breeding systems and the use of genetic formulae make it a helpful, useful book to every scientist interested in canine genetics and every layman interested in dog breeding.

The book contains many interesting halftones and line drawings, a glossary, and a 240-item bibliography.

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Investment Castings for Engineers. Rawson L. Wood and Davidlee Von Ludwig. New York: Reinhold Pub., 1952. 477 pp. Illus. $10.00.

The purpose of this text is to acquaint design engineers with the investment process, to help him obtain maximum efficiency and economy from his design and specifications. When selecting a process by which an engineering part is to be produced, the designer weighs all the factors affecting function and cost. In order to do this most effectively he should have more than a general knowledge of all the prospective processes. Also, because of lack of knowledge of a process, a designer may avoid it and consequently not obtain the best results from his design.

After determining the process to be used, an efficient design engineer must have an intimate knowledge of the process so that the part may be designed for most economical production. The text therefore describes the various investment processes in detail. It points out how the various steps in the production of the casting are related to design. For example, in discussing the factors influencing the positioning of the gate, the designer finds that he cannot expect to obtain tolerances less than 0.010 inch near the gate area. In the discussion on "Factors Affecting Die Life," he points out that thin design sections necessitate the use of hardened steel dies in the production of wax patterns, because of higher temperatures needed to produce such sections.

After a brief history of investment casting, the text continues with the production of the master pattern, describing various types of dies obtained from it. This is followed by a very thorough discussion of types of patterns in use. One chapter deals with the "Frozen Mercury Disposable Pattern," a development not too familiar to the average engineer. Information on investment materials and techniques used in producing molds follows, and after a brief description of the melting techniques, the text deals quite thoroughly with ferrous and nonferrous metals used in investment casting. This is followed by information on cleaning, inspecting, and finishing of the castings. The next 90 pages deal with design of castings for the investment process. The last two chapters treat the metallurgical effect of the process on metals, and machinability tests on stainless steels.

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Scientific Book Register

Thermal Diffusion in Gases. K. E. Grew and T. L. Ibbs. New York: Cambridge Univ. Press, 1952. 143 pp. Illus. $4.50.

The Philosophy of Science: An Introduction. Stephen Toulmin. London: Hutchinson's Univ. Library; New York: Longmans, Green, 1953. 176 pp. Illus. $2.25; text ed. $1.80.

Scientific Terminology. (Medical, biological, and general.) John N. Hough. New York: Rinehart, 1953. 231 pp. $3.50.

The Microbiological Assay of the Vitamin B-Complex and Amino Acids. E. C. Barton-Wright. New York–London: Pitman, 1952. 179 pp. Illus. $4.00.