From the available evidence showing the reaction of the new-born animal to environmental temperatures, Dr. June Hill suggests that the metabolism of the new-born of a warm-blooded species often differs from that of the adult animal in two important respects: first, the new-born animal has a lower basic metabolic rate than is appropriate for its surface area; and secondly, per unit surface area, the new-born animal has a smaller maximal metabolic response to cold. Thus the heat production of the new-born animal, both minimal and maximal, is lower per unit surface area than that of the adult. The degree of immaturity at birth probably determines to what extent the metabolism of the new-born deviates from the adult pattern.

In addition, the new-born animal often has a coat of lower effective insulating power than that of its parent; this is partly because the new-born is smaller than the adult, and is partly a specific attribute of immaturity. This means that, per unit surface area at a given environmental temperature, the new-born animal loses heat much more readily than the adult.

These facts underlie, and go far to account for, the difficulties which many new-born animals experience in maintaining a stable internal body-temperature.

LIFE AND SCIENTIFIC WORK OF SIR JAMES HALL

THE Bruce-Preller Lecture of the Royal Society of Edinburgh was delivered on June 5 by Dr. V. A. Eyles, formerly of the Geological Survey of Great Britain, who took as his subject, "The Life and Scientific Work of Sir James Hall, Bart., F.R.S. (1761–1832), Second President of the Royal Society of Edinburgh".

Sir James Hall, fourth Baronet of Dunglass, Haddingtonshire, was born on January 17, 1761. He was a great nephew of Sir John Pringle, Bart., the distinguished Army physician, a president of the Royal Society of London. Owing to the early death of Hall's father, Sir John took charge of his education. He attended the Universities of Cambridge, Geneva and Edinburgh. After extensive travel in Europe he settled down at Dunglass, though spending much time at his town house in Edinburgh. In 1786 he married Lady Helen Douglas, a daughter of the Earl of Selkirk.

Hall had been elected a member of the newly formed Royal Society of Edinburgh in 1784, and for many years took a prominent part in the affairs of the Society. He became president in 1812, being the first scientist to occupy the presidential chair. He was elected Fellow of the Royal Society of London in 1806.

Though chiefly remembered as a geologist of the Huttonian school, he was always much interested in chemistry, having been a student of Joseph Black, in Edinburgh. His first address to the Royal Society of Edinburgh was on Lavoisier's new theory of chemistry, to which he had been converted by Lavoisier himself, whom he had met a number of times in Paris.

Hall contributed a number of papers to the Edinburgh *Transactions*, chief among them being his "Account of the Effects of Compression in Modifying the Effects of Heat". This describes the long series of experiments by which he demonstrated that limestone, when heated under pressure, remains undecomposed. This paper has become a classic, and illustrates Hall's great skill as an experimentalist. Hall has been called the 'father of experimental geology', but might, perhaps more aptly, be called the 'father of geochemistry'. His skill as an experimentalist has tended to obscure the fact that he was also an extremely able field-geologist.

Hall was a man of many interests, including, in later life, politics, and he was member of Parliament for the St. Michael division in Cornwall during 1807–1812. He died in 1832, after suffering ill-health in his later years.

HOSPITAL IN-PATIENTS IN BRITAIN

A REPORT on the Hospital In-Patient Enquiry for 1959 gives provisional figures for that year and some comparisons with earlier years*. The report is based on data provided by hospitals (other than psychiatric hospitals) in the National Health Service, on forms giving a confidential summary of the case records of a 10 per cent sample of discharges (the term includes deaths). The purpose of the inquiry is to provide statistics to assist the administration of the hospital service and to supplement other statistics about mortality and illness in the community. It is organized jointly by the Ministry of Health and the Central Register Office. 1959 was the second year in which the inquiry had almost complete coverage of the relevant hospitals in England and Wales.

The tables in the report show the diagnostic distribution of case discharges in 1959 and in each year back to 1955, regional figures for selected important conditions back to 1956, regional figures for maternity cases according to the type of maternity care received, and the distribution of the cases in the 1959 sample by sex, age and diagnosis. It also includes the estimates of the population of hospital regions by sex and age at June 30, 1959.

There were, in all, 3,664,100 discharges from the relevant hospitals in 1959, or 807·3 per 10,000 population, compared with 3,554,700, or 788·0 per 10,000 in 1958, an increase of 2·4 per cent. The estimated numbers of discharges for most common causes of admission to hospital showed some increase, though much of this was probably due to more efficient use of hospital services rather than to increased illness.

Respiratory tuberculosis continued to decrease. There were 44,300 discharges in 1959, 9·8 per 10,000 population, compared with 48,800 and a rate of 10·8 in 1958. The rates for males fell in all regions except Liverpool, where an intensive mass radiography campaign was held early in the year.

* Ministry of Health and General Register Office. Report on Hospital In-Patient Enquiry for the year 1959. Part 1: Preliminary Tables. Pp. 16. (London: H.M. Stationery Office, 1961.) 1*s*. 6*d*. net.