obtained for one locality cannot be fully applied to another, much less extended to determine the temperature at the superior limit of the atmosphere.

An interesting point of resemblance between Mr. Hall's observations and those made on the Himalaya is that the diurnal range of temperature diminishes to a minimum at about 5000 feet, and then increases with increasing elevation.

Allahabad, March 30

S. A. HILL

Royal Society's *Soirée*

MAY I be permitted, through the columns of NATURE, to ask, on behalf of the Sub-Committee appointed to make arrangements for the forthcoming *soirée* of the Royal Society, that Fellows and others who have apparatus or objects of scientific interest suitable for exhibition on that occasion will communicate at once with the Secretaries or myself.

Royal Society, Burlington House

HERBERT RIX,
Asst. Sec. R. S.

HOMERIC ASTRONOMY¹

II.

TURNING to the second great constellation mentioned in both Homeric epics, we again meet traces of remote and unconscious tradition. Yet less remote, probably, than that concerned with the Bear. Certainly less inscrutable. For recent inquiries into the lore and language of ancient Babylon have thrown much light on the relationships of the Orion fable.

There seems no reason to question the validity of Mr. Robert Brown's interpretation of the word by the Accadian *Ur-ana*, "light of heaven" ("Myth of Kirke," p. 146). But a proper name is significant only where it originates. Moreover, it is considered certain that the same brilliant star-group known to Homer no less than to us as Orion, was termed by Chaldeo-Assyrian peoples "Tammuz" (Lenormant, *Origines de l'Histoire*, t. i. p. 247), a synonym of Adonis. Nor is it difficult to divine how the association came to be established. For about 2000 B.C., when the Euphratean constellations assumed their definitive forms, the belt of Orion began to be visible before dawn in the month of June, called "Tammuz," because the death of Adonis was then celebrated. It is even conceivable that the heliacal rising of the asterism may originally have given the signal for that celebration. We can at any rate scarcely doubt that it received the name of "Tammuz" because its annual emergence from the solar beams coincided with the period of mystical mourning for the vernal sun.

Orion, too, has solar connexions. In the Fifth "Odyssey" (121-24), Calypso relates to Hermes how the love for him of Aurora excited the jealousy of the gods, extinguished only when he fell a victim to it, slain by the shafts of Artemis in Ortygia. Obviously, a sun-and-dawn myth slightly modified from the common type. The post-Homeric stories, too, of his relations with Enopion of Chios, and of his death by the bite of a scorpion (emblematical of darkness, like the boar's tusk in the Adonis legend), confirm his position as a luminous hero (R. Brown, *Archæologia*, vol. xlvii. p. 352; "Great Dionysiak Myth," chap. x. § v.). Altogether, the evidence is strongly in favour of considering Orion as a variant of Adonis, imported into Greece from the East at an early date, and there associated with the identical group of stars which commemorated to the Accads of old the fate of Dumuzi (*i.e.* Tammuz), the "Only Son of Heaven."

It is remarkable that Homer knows nothing of stellar mythology. He nowhere attempts to account for the names of the stars. He has no stories at his fingers' ends of translations to the sky as a ready means of exit from terrestrial difficulties. The Orion of his acquaintance—the beloved of the Dawn, the mighty hunter, surpassing in beauty of person even the divinely-born Alcidæ

—died and descended to Hades like other mortals, and was there seen by Ulysses, a gigantic shadow "driving the wild beasts together over the mead of asphodel, the very beasts which he himself had slain on the lonely hills, with a strong mace all of bronze in his hand, that is ever unbroken" ("Odyssey," xi. 572-75). His stellar connexion is treated as a fact apart. The poet does not appear to feel any need of bringing it into harmony with the Odyssean vision.

The brightest star in the heavens is termed by Homer the "dog of Orion." The name *Seirios* (significant of sparkling), makes its *début* in the verses of Hesiod. To the singer of the "Iliad" the dog-star is a sign of fear, its rising giving presage to "wretched mortals" of the intolerable, feverish blaze of late summer (*opora*). The deadly gleam of its rays hence served the more appropriately to exemplify the lustre of havoc-dealing weapons. Diomed, Hector, Achilles, "all furnish'd, all in arms," are compared in turn, by way of prelude to an "*aristeia*," or culminating epoch of distinction in battle, to the same brilliant but baleful object. Glimmering fitfully across clouds, it not inaptly typifies the evanescent light of the Trojan hero's fortunes, no less than the flashing of his armour, as he moves restlessly to and fro ("Iliad," xi. 62-6). Of Achilles it is said:—

"Him the old man Priam first beheld, as he sped across the plain, blazing as the star that cometh forth at harvest-time, and plain seen his rays shine forth amid the host of stars in the darkness of night, the star whose name men call Orion's Dog. Brightest of all is he, yet for an evil sign is he set, and bringeth much fever upon hapless men. Even so on Achilles' breast the bronze gleamed as he ran" (xxii. 25-32).

In the corresponding passage relating to Diomed (v. 4-7), the *naïve* literalness with which the "baths of Ocean" are thought of is conveyed by the hint that the star shone at rising with increased brilliancy through having newly washed in them.

Abnormal celestial appearances are scarcely noticed in the Homeric poems. There are neither eclipses¹ of sun or moon, nor comets, nor star-showers. The rain of blood, by which Zeus presaged and celebrated the death of Sarpedon ("Iliad," xvi. 459, also xi. 54) might be thought to embody a reminiscence of a crimson aurora, frequently, in early times, chronicled under that form; but the portent indicated is more probably an actual shower of rain tinged red by a microscopic alga. An unmistakable meteor, however, furnishes one of the glowing similes of the "Iliad." By its help the irresistible swiftness and unexpectedness of Athene's descent from Olympus to the Scamandrian plain are illustrated.

"Even as the son of Kronos the crooked counsellor sendeth a star, a portent for mariners or a wide host of men, bright shining, and therefrom are scattered sparks in multitude; even in such guise sped Pallas Athene to earth, and leapt into their midst" ("Iliad," iv. 75-9).

In the Homeric verses the Milky Way—the "path of souls" of prairie-roving Indians, the mediæval "way of pilgrimage"²—finds no place. Yet its conspicuousness, as seen across our misty air, gives an imperfect idea of the lustre with which it spans the translucent vault which drew the wondering gaze of the Ionian bard.

The point of most significance about Homer's scanty astronomical notions is that they were of home growth. They are precisely such as would arise among a people in an incipient stage of civilisation, simple, direct, and childlike in their mode of regarding natural phenomena, yet incapable of founding upon them any close or connected reasoning. Of Oriental mysticism there is not a vestige. No occult influences rain from the sky. Not so

¹ Görlitz finds a prediction of a solar eclipse at "Odyssey," xx. 357; but the expression appears quite indefinite and figurative.

² To Compostella. The popular German name for the Milky Way is still *Jakobsstrasse*, while the three stars of Orion's belt are designated, in the same connexion, *Jakobsstab*, staff of St. James.

¹ Continued from p. 588.