passing through a range in which the pressure falls rather slowly with change of composition, and finally falling rapidly to the dissociation pressure of $Fe_3O_4$, which is very low. This in turn dissociates into oxygen and a mixture of oxides the character of which has not yet been determined. The properties of FeO are still practically unknown.

IN the March–April number of the *Bulletin de la Société d'Encouragement pour l'Industrie Nationale* Prof. Ch. Féry gives some particulars of the work of the optical laboratory of the Ecole de Physique et de Chimie Industrielles at Paris. The present laboratory has been available for students for four years. Before and since its erection many important researches have been carried out, and, more particularly, the experiments undertaken so successfully of recent years by Prof. Féry on optical pyrometry. Prof. Féry is probably the most competent authority on this subject, and his methods may be said to be of almost universal application in works practice. Among other recent investigations may be mentioned the following:—Research on the calorific emission of the sun; note on the solar constant and apparent temperature of the sun; researches on radiation; an absorption spectrophotometer; an electric chronometer; a new thermo-electric calorimeter; the principle of a new method of measuring the velocity of light; and the chemical theory of lead-plate accumulators. The laboratory was the birthplace of the Grassot fluxmeter and the now world-famed Méker burner. This list shows that the laboratory has been keenly alive to industrial and scientific research, as well as to instruction. Special dark-rooms are provided in the laboratory for photometric and other optical experiments, while a balcony allows of experiments being conducted in the open air. Further rooms are provided for work on the optical bench, for the metallography of steel and alloys, and for chemical experiments. Special rooms are provided in the basement, built on masonry foundations, for work where absence of vibration is required. All rooms are carefully heated, lighted, and ventilated. The new electrochemical and physical laboratories and that devoted to the investigation of dyes, the mineralogical collections, the central library, and the lecture-rooms, are all built on modern principles, and directed, like the optics laboratory, with due regard to modern teaching and research requirements.

MESSRS. A AND C. BLACK, LTD., announce for immediate publication "An Introduction to the Physiology and Psychology of Sex," by Dr. S. Herbert. The work will direct attention to the important facts respecting sex, mating, and reproduction, from the physiological and psychological points of view.

## OUR ASTRONOMICAL COLUMN.

COMET 1917*b* (SCHAUMASSE).—The following continuation of the ephemeris for Greenwich midnight given in NATURE of May 31 has been received from Copenhagen:—

| 1917 | R.A. h. m. s. | Decl. ° ′ | Log $r$ | Log $\Delta$ | Mag. |
|---|---|---|---|---|---|
| June 15 | 9 25 28 | +18 24·8 | | | |
| 17 | 28 2 | 17 12·3 | 9·9829 | 0·0550 | 10·6 |
| 21 | 32 8 | 15 12·5 | 0·0033 | 0·1071 | 10·9 |
| 25 | 35 20 | 13 36·7 | 0·0238 | 0·1528 | 11·3 |
| 29 | 37 59 | 12 17·5 | 0·0442 | 0·1925 | 11·6 |
| July 3 | 40 17 | 11 10·3 | 0·0642 | 0·2276 | 11·8 |
| 7 | 42 21 | 10 11·9 | 0·0837 | 0·2587 | 12·1 |

THE SPECTRUM OF COMET 1917*a* (MELLISH).—Prof. Frost reports that the spectrum of Mellish's comet, as observed at the Yerkes Observatory on March 21, showed a close resemblance to that of Morehouse's comet (Journ. R.A.S. Canada, vol. xi., p. 196). The cyanogen band 3883 and the blue carbon band, with its red edge at 4741, were strong, and there were other bands at 3914, 4017, and 5075. It may be remarked that the band 3914 was probably the negative band of nitrogen at that wave-length, while 4017 and 5075 would appear to be two of the bands of the low-pressure spectrum of carbon monoxide, these being especially characteristic of the tails of comets.

EFFECTIVE TEMPERATURES OF STARS.—The values of stellar temperatures derived by Rosenberg from comparisons of the intensity at different wave-lengths in photographic spectra have been discussed by Dr. Wilsing (*Astronomische Nachrichten*, No. 4881). A new reduction of Rosenberg's observations has brought the results for stars of early type into much closer accordance with the Potsdam values, as will appear from the examples included in the following table:—

| | Type | Rosenberg | Rosenberg corrected | Scheiner and Wilsing |
|---|---|---|---|---|
| | | ° | ° | ° |
| *a* Andromedæ ... | I.*a* 2 | 33,000 | 13,500 | 8,800 |
| *a* Pegasi ... ... | I.*a* 2 | 27,500 | 12,200 | 13,600 |
| *γ* Geminorum ... | I.*a* 2 | 16,000 | 10,000 | 11,800 |
| *a* Aquilæ ... ... | I.*a* 3 | 10,500 | 7,700 | 7,700 |
| *η* Bootis ... ... | II.*a* | 5,500 | 4,700 | 5,200 |
| *γ* Cygni ... ... | II.*a* | 5,100 | 4,400 | 6,000 |
| *ε* Bootis ... ... | II.*a*–III.*a* | 5,300 | 4,500 | 4,200 |
| *a* Bootis ... ... | II.*a*–III.*a* | 3,100 | 2,800 | 3,600 |
| *β* Andromedæ ... | II.*a*–III.*a* | 2,650 | 2,400 | 3,000 |
| *a* Orionis ... ... | III.*a* | 2,200 | 2,000 | 3,000 |

Scheiner and Wilsing's values were based upon visual observations with a spectrophotometer.

## THE FELLOWSHIP OF THE ROYAL SOCIETY.

IN the annual report of the council of the Royal Society, adopted at a special general meeting in November last, certain changes in one of the statutes relating to the election of fellows were submitted. These changes were put forward after detailed deliberation by the council, and were based upon a report prepared by a committee appointed to consider the subject. Statute XII. of the society provides for the special election of persons who "either have rendered conspicuous service to the cause of science, or are such that their election would be of signal benefit to the society, provided that not more than two persons shall be so recommended in any one calendar year, and if two persons be elected in any one year there shall be no election in the following year."

By the new statute proposed by the council and adopted at the special meeting on November 2, 1916, the council could recommend to the society for election "(A) Privy Councillors whose election would assist the society; (B) men distinguished in the scientific or educational service of the State, or by their services to science and its applications, provided that (1) the number of fellows in Class A shall not exceed twenty-five at any time, including the fellows elected as Privy Councillors under the statutes in force before 1903; (2) the number of fellows in Class B shall not exceed twenty-five at any time not more than five being elected in any one year." As in the original statute, any person so recommended for election had to receive the votes of two-thirds of the members of council present, and the number of votes in his favour had to be not fewer than eleven.

In February last a memorial signed by a large number of fellows of the society was presented to the council asking that steps should be taken to consult

the general body of fellows as to the introduction of the amended statute, and not to proceed with any recommendation for election under it before thorough reconsideration of the whole question. Fear was expressed that the amended statute might result in the election under (A) of "a politician, not at all necessarily of high distinction, who may be engaged in particular legislative or other public activity, on the ground only that his election would assist the work of the society," and under (B) of generous donors to the society or other scientific institutions, and the chief permanent officials of all departments of State concerned with scientific matters.

At the request of the memorialists, a special general meeting was held on June 7 to reconsider the amended statute, and the following resolution, moved by Sir David Bruce and seconded by Sir E. Ray Lankester, was carried after a long discussion :—"That this meeting is of opinion that the council will serve the best interests of the society by restoring Statute XII. to the form it had before the change made in it by the council on November 2, 1916, and by postponing further consideration of the statute relating to the election of fellows until after the termination of the war."

The action of the council in endeavouring to provide for the election of a few fellows on a broader basis than at present exists is thus practically undone. It was thought by some fellows that opposition to the new statute might have been met by a resolution to suspend elections under it during the war, and to leave any question of rescinding it until after the war; but the meeting decided to refer back to the council the whole question of amendment. A new council is, however, now in office, and the considerations which led to the recommendation of the amended statute will have to be gone over again in detail for the benefit of the new members when the resolution comes before the council.

## *THE ANIMAL SYMBOL OF THE EGYPTIAN DEITY, SET.*

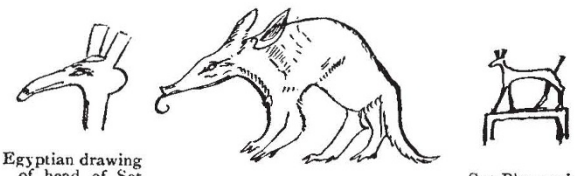
M. G. DARESSY has been writing[1] concerning the long-disputed question as to the identity of one of the animals which the old Egyptians selected as the symbol of their malevolent deity, Set, or Seth. Among creatures suggested as intended by the Egyptian artists have been the jackal, hare, oryx, and okapi, but all these assignments have been abandoned.

Two years ago Dr. Schweinfurth decided upon the orycterope, or anteater, the Erdferkel of the Sudan and Aardvaark of the Boers, because of the almost absolute resemblance of its head and snout to the Set quadrupeds.

The long legs and tail shown in Egyptian drawings, the tail often depicted vertically erect, and with double tufted end, render this attribution difficult, so M. Daressy has reviewed the question from the archæological side, summarising important Egyptian writings, and citing the delineations of the Set animal by their draughtsmen. From the literary side he illustrates the question from myth and stories of Set, of whom the creature was the crest, totem, and symbolic hieroglyph.

In the myths, when Set, with his name changed to Souti, became ally, instead of foe, of Horus, he was deemed lord of Upper Egypt, as Horus was of Lower Egypt and the Delta. This suggests that Set may have been a ruler of Upper Egypt, who warred with Osiris, King of Lower Egypt, and later also with Horus.

Although the myths speak of Set as god of evil, darkness, and the sterile deserts, the fact of his in some cases being said to have been reconciled to Horus, though he had assassinated Horus's father, Osiris, caused Set to be semi-deified, and a few shrines for his worship have been found as Souti. At Edfu he was a crocodile, though never worshipped under that type, crocodile deities such as Sobk and Pnepheros being different concepts. Set took other evil animal forms, such as the boar and swine, creatures abhorred in many religions. M. Daressy argues that the Set animal is really a creation of the imagination, the object of the design being to depict a creature so constructed as to be impotent to destroy Horus. If this was so, it is futile to search for the creature in either the existing or fossil fauna of Africa.



Egyptian drawing of head of Set animal. *Orycterope aethiopicus.* Set Pharaonic crest.

M. Daressy thinks the design embodies all the most opposite characters to those of a boar. If so, the animal is merely a fantastic design to symbolise the evil aspect of the deity.

But once in Egyptian history a Pharaoh, instead of using the falcon, which was their solar Horus dynastic crest, for his totem, in the Second or Third Dynasty employed for his honour the Set animal. This king was probably ruler of Upper Egypt solely, but his successor, to assure his subjects that he was under the tutelary protection of all Egypt's deities, used the double crests of the Set animal and Horus falcon, and the Set one was never used again for a royal symbol. It is very improbable this would have been done if the Set figure was a sort of serio-comic invention.

Head of Set in Spink collection.

It should be borne in mind that the ancient Egyptian animal-gods were (unless Set is an exception) real existing creatures. The Sphinx was not a god, or even totem of any particular deity. In the tombs at Beni Hassan various fantastic animals are depicted as denizens of the desert, and real ones also. The Set creature is there placed between a real and an imaginary one. An interesting fact is that the greater the antiquity of the figure, the less abnormal are its features from those of a dog, or jackal, or some allied species. Thus on some of the Serekh figures containing the name of the early dynasty Pharaoh, Perabsen, the Set quadruped is identical with old Egyptian drawings of jackals, which were sacred to Anubis excepting for its long erect tail, which has not the forked ending introduced later.

This Pharaoh only bore the Upper Egypt crown, so the creature, if a real one, may not have existed in Lower Egypt, and Set himself, as noted, seems to have ruled in Upper Egypt only.

It is just possible that remains of a member of the

[1] M. Daressy's article may be found in the Bulletin de l'Institut Français d'Archéologie Orientale, tome xiii., pp. 77-92.