by the Zoological and Acclimatisation Society of Melbourne; a Dorsal Squirrel (*Sciurus hypopyrrhus*) from Central America, a Greater Sulphur-crested Cockatoo (*Cacatua galerita*) from Australia, twenty-five Indian Crocodiles (*Crocodilus palustris*) from India, deposited.

OUR ASTRONOMICAL COLUMN

PARALLAXES OF SOUTHERN STARS.—We learn from Mr. Gill, H.M. Astronomer at the Cape, that he has completed a memoir on the parallax of some of the principal southern stars, founded upon observations by himself and Dr. Elkin; the memoir contains investigations on parallax of

By Gill { α Centauri (two series with different comparison-stars); Sirius; ε Indi; Lacaille 9352 (Gould's star with proper motion of 7″); o^2 Eridani, and β Centauri.

By Elkin { α Centauri (two series with different comparison-stars from Gill's); Sirius; ε Indi (also with different stars); ζ Tucani; *e* Eridani and Canopus.

Mr. Gill's important memoir has been communicated to the Royal Astronomical Society, and its publication will doubtless be awaited with much interest by astronomers.

The large proper motion of Lacaille 9352 was detected by Dr. Gould, and announced in No. 2377 of the *Astronomische Nachrichten*. The annual P.M. in arc of great circle is 6″·96 in the direction 79°·2. It is a star of 7·5 m. in Piscis Australis: Mr. Stone's place for 1880·0 is in

R.A. 22h. 58m. 5·43s., N.P.D. 126° 32′ 40″·0.

In only one instance has the existence of a larger proper motion been discovered, viz. in that of the well known 6·7 m. Groombridge 1830 in Ursa Major, where the amount is 7″·05. *e* Eridani, 4·4 m., is in R.A. 3h. 15m. 8·16s., N.P.D. 133° 31′ 46″·8 for 1880, according to Stone, who attributes to it an annual proper motion of 3″·0 in the direction 75°·5. ζ Tucani, a fourth magnitude, is in R.A. oh. 13m. 48·60s., N.P.D. 155° 34′ 49″·0 for 1880, with an annual proper motion of 4″·35 on an angle of 74°·8, by Stone's values.

Mr. Gill expects to be in England early in February, to superintend a large amount of official printing, for which he brings copy with him.

PONS' COMET.—For a few evenings this comet will form a pretty conspicuous object as it descends in the south-western sky; after it ceases to be visible in Europe observations may be continued at the observatories of the other hemisphere for several months. On March 26 the theoretical intensity of light will be ten times, and a month later, five times, greater than at the beginning of September, when the comet was discovered through the diligent scrutiny of the heavens, followed up by Mr. Brooks, who found it considerably beyond the limits of the sweeping ephemerides then in the possession of observers. Mr. S. C. Chandler has conjectured that a meteor-stream may be connected with this comet. MM. Schulhof and Bossert's orbit for 1884 gives the radiant in R.A. 197°·8, Decl. + 67°·3.

THE MINOR PLANETS.—The *Berliner Astronomisches Jahrbuch* for 1886 contains elements and approximate ephemerides for the present year of 231 of the known members of this extensive group, only four therefore being omitted in the absence of the necessary data. In addition there are twenty-six accurate opposition-ephemerides. Four of these small planets approach the earth, within her mean distance from the sun, in 1884. At the end of December No. 132 *Æthra*, situate in the vicinity of α Orionis, will approach the earth within 0·85, and shining as a star of the ninth magnitude, will afford another favourable opportunity for the investigation of solar parallax, on the method advocated by Mr. Gill.

SCIENCE IN RUSSIA[1]

THE *Memoirs* (*Zapiski*) *of the Novorossian Society of Naturalists*, at the University of Odessa, founded only in 1873, have already reached their eighth volume, and contain a good deal of valuable work. Confining our analysis to the last three volumes, we notice in them the following papers:—In the domain of geology Prof. Sintsoff contributes several papers. One of them is an elaborate monograph on the sponges from the chalk of Saratoff. Revising his former work on the same subject, and taking advantage of the well-known work of Prof. Zittel, as well as of new extensive collections, M. Sintsoff creates a number of new species and four new genera: *Mæandroptychium*, which he proposes to substitute for those of *Cæloptychium*, *Etheridgia*, and *Tremabolites*; *Labyrintholites*, closely allied to *Plocoscyphia*; *Polyscyphia*, akin to the preceding; and *Zittelispongia*. The author describes (with figures) seven species of the first, four species of the second and the third, and one species of the fourth, as well as the following species:—*Cuculispongia triloba*, Trautschold, *Craticularia cylindrica*, Mischl.; two species of *Ventriculites*, two species of *Coscinopora*, *Leptophragma simplex*, T. Smith, *Actinosiphonia radiata*, Fisch., and the new species *Hallirhoa peskowi* and *Isoraphinia cavata*.—The same author contributes a second paper on Mesozoic fossils from Simbirsk and Saratoff (the first paper having appeared in vol. iv.), and describes the following species:—*Ammonites longispinus* and *caletanus*, *Scalaria dupiniana*, var. *rhodani*, *Astarte beaumontii*, *Panopæa neocomiensis*, and as new species *Aporrhais striata-carinata*, *Nucula subarduennensis*, and *Lucina neutralis*.—A third paper by the same author contains a description of the following Tertiary fossils of Novorossia:—*Dreissena rostriformis*, Desh., *Hydrobia mathildæformis*, Fuchs, *H. dimidiata*, Eichw., *Valvata variabilis*, Fuchs, *Neritina danubialis*, Pfeif., var. *liturata*, Eichw., *N. prevostriana*, Partsch., and *N. capillacea*, Brusina, from the Pliocene; *Trochus rollandianus*, d'Orb., *Phasianella kischinerviæ*, d'Orb., and as new species *Trochus minutus*, *semistriatus*, and *elegantulus*, *Hydrobia substriatula*, *Amnicola cyclostomoides*, and *Valvata pseudo adeorbis*, from the Miocene. All these fossils are represented in the plates.—M. Prendel contributes a paper on the geological structure of the districts of Elizabethgrad and Alexandria, in the government of Kherson. The rocks are granites, mostly as schists, and considered by the late Barbot-de-Marny as a product of metamorphism of sedimentary rocks, and very small patches of Huronian schists, covered with numerous isolated islands of Eocene. The whole is covered with the "White Sands," where M. Prendel has found a stem of *Cupressonoxylum severzovi*, Merklin (Miocene?), and with loess, which contains, besides the usual fossils, remains of *Arctomys bobac*, which does not now extend in Russia south of 52°–54° N. lat.—The same author contributes (vol. viii.) another paper on the crystalline rocks on the Bazavlouk and Saksagan Rivers, right tributaries of the Lower Dnieper. The paper is accompanied by a map of coloured sections of microscopic specimens of crystalline rocks.

The chief papers in these *Memoirs* are however devoted to comparative anatomy and zoology. Without attempting to summarise their varied contents, we can merely enumerate most of them. All are profusely illustrated with plates. In the sixth volume we notice a preliminary communication by Madame Olga Mechnikoff, on the anatomy of cartilaginous fishes; and a note, by Prof. H. Mechnikoff, on the larva of the *Anisoplia*.—M. Repyakoff contributes an elaborate paper on the morphology of the *Bryozoa*. Without attempting to determine the place that the Bryozoæ ought to occupy in systematic classification, the author devotes his special attention to the relations between the two great subdivisions of the Endoproct and Ectoproct Bryozoæ, and his paper is a valuable contribution to the work undertaken by Nitsche, Hatschek, Joliet, and Barrois.—M. Zabarinsky contributes a paper on the morphology of the Hydra.—In vol. vii. M. Buchinsky publishes a paper on the development of the earthworm, devoting his special attention to the development of its mesoderm and of its nervous system.—In vol. viii. M. Krasilschik contributes an elaborate paper on the development of the *Polytrema*, and the place it occupies with regard to other Flagellatæ; M. Repyakoff publishes a note on the larvæ of the *Polygordius flavocapitatus*; M. Depp, on the life of the Macropodes; and M. A. Kovalevsky, on the development of the Chiton.—In physiology we notice the researches, by M. Spiro, into the development of bile, being the result of various experiments, and accompanied with tables showing the dependence of its amount upon the food.

In botany we find the researches by M. Rishavi on the development of the organs of reproduction in *Dasya elegans* (vol. vi.); a list of lichens collected on Mount Castel in the Crimea, and determined by Dr. Brutann in Dorpat (vol. vii.); and a work, by M. Kojernikoff, on the anatomical structure of the corolla in flowers. The author has extended his researches

[1] *Memoirs of the Novorossian Society of Naturalists* (*Zapiski Novorossiyskago Obschestva Estestvoispytateley*), vols. vi., vii., and viii. Odessa.