

In the *Entomologist's Monthly Magazine* for August, the attention of collectors is directed to the possibility that the south European wingless earwig (*Forficula decipiens*) may be indigenous to England, since two earwigs with aborted wings recently taken in the Isle of Wight appear indistinguishable from that species.

An elaborate cloth-bound illustrated catalogue (in English) of the physical apparatus made by the firm of E. Leybold's successor, of Cologne, has been sent to us. It contains full descriptions of many pieces of apparatus, with instructions for use, and should be seen by all science teachers.

OUR ASTRONOMICAL COLUMN.

ASTRONOMICAL OCCURRENCES IN SEPTEMBER:—

- Sept. 3. 8h. Mercury and Venus in conjunction. Mercury $0^{\circ} 26' N.$
- 4. Daniell's comet in perihelion.
- 12. 11h. Minimum of Algol (β Persei).
- 14. 4h. Venus in superior conjunction with Sun.
- 13. 8h. 4m. Minimum of Algol (β Persei).
- 14. 1m. Transit (egress) of Jupiter's Sat. III. (Ganymede).
- 16. 11h. 13m. Mars in conjunction with Moon. (Mars $4^{\circ} 27' S.$).
- 17. 14h. Saturn in opposition to the Sun.
- 21. 7h. 10m. to 7h. 59m. Moon occults 30 Piscium (mag. 4.7).
- „ 9h. 4m. to 9h. 37m. Moon occults 33 Piscium (mag. 4.6).
- 22. 14h. 42m. to 18h. 20m. Transit of Jupiter's Sat. III. (Ganymede).
- 23. 18h. Sun enters Libra. Autumn commences.
- 24. 12h. 51m. to 13h. 46m. Moon occults μ Ceti (mag. 4.4).
- „ 18h. 1m. Transit (ingress) of Jupiter's Sat. IV. (Callisto).
- 26. 11h. 57m. to 12h. 59m. Moon occults δ^2 Tauri (mag. 4.7).
- 29. 18h. 58m. Transit (ingress) of Jupiter's Sat. III. (Ganymede).

DANIEL'S COMET (1907).—The following is an extract from the continuation of Dr. Stromgren's ephemeris for comet 1907d as published in No. 4196 of the *Astronomische Nachrichten* (p. 337, August 23).—

1907		Ephemeris 12h. (M.T. Berlin).							
		α (true)	δ (true)	$\log r$	$\log \Delta$	Bright		nes.	
h.	m.								
Sept. 1	8 50.8	...	+13 34.6	...	9.7144	...	0.0534	...	19.1
„ 3	9 4.0	...	+12 59.3	
„ 5	9 16.8	...	+12 22.6	...	9.7123	...	0.0847	...	16.7
„ 7	9 29.4	...	+11 44.6	
„ 9	9 41.5	...	+11 5.7	...	9.7250	...	0.1139	...	13.7

An observation at Padua on August 18 gave corrections of +30s. and -0.7 to this ephemeris.

On September 1 the comet will be $81^{\circ} 5' N.$ of α Cancri, whilst on September 8 it will be $66^{\circ} 4' N.$ of α Leonis.

The comet will rise about $2\frac{1}{2}$ hours before the sun on September 1, and about two hours before the sun on September 9.

FURTHER OBSERVATIONS OF MARS.—The August number of the *Bulletin de la Société astronomique de France* contains an interesting paper by M. Jarry-Desloges giving the results of observations of Mars made during July last at a temporary observatory erected on the summit of the Revard at an altitude of 1550 metres.

M. Jarry-Desloges and his collaborator, M. G. Fournier, confirmed the doubling of the Solis Lacus announced by Mr. Lowell. They also comment upon the cloudy appearance of the Martian landscape in the northern hemisphere as compared with the clear-cut features of the southern hemisphere of the planet.

The faint canals were difficult to observe, but the Ganges was seen to be very broad and appeared double, the two points where it emerges from the Auroræ Sinus being seen quite sharply; the observer states, however, that this observation needs confirming.

On July 19 the region north of Lacus Niliacus was clear, but twenty hours later, on July 20, details of white spots could be seen; thus it appears that in less than twenty hours the clouds or mists which covered this part of the planet vanished.

A SUSPECTED, LARGE PROPER MOTION.—Having occasion to measure the places of three B.D. stars (B.D. +1 $^{\circ}$.2720, +1 $^{\circ}$.2722, and +0 $^{\circ}$.2957) on his star photographs, Prof. Barnard found that the positions determined by him for two of the stars differed considerably from the B.D. positions. That of 1 $^{\circ}$.2720 is unusually discordant with the B.D., though the difference may be due to an error in the latter; but in the case of 0 $^{\circ}$.2957 the difference between Prof. Barnard's position and that determined at Bonn amounts to nearly a second of time. Therefore, if the observations are correct, the star B.D. +0 $^{\circ}$.2957 must have a considerable proper motion (*Astronomische Nachrichten*, No. 4195, p. 313, August 7).

THE ASTROGRAPHIC CHART.—From No. 386 of the *Observatory* (p. 329, August) we learn that the Potsdam Observatory does not intend to take and distribute the long-exposure photographs (chart plates) of the zone (+32 $^{\circ}$ to +39 $^{\circ}$) allotted to it. The work will be done at the Royal Observatory of Belgium, which is being reorganised on a somewhat liberal scale.

THE SIMULTANEOUS INVISIBILITY OF JUPITER'S SATELLITES.—On March 7 we referred in these columns to the simultaneous invisibility of Jupiter's four major satellites on October 3 next. In the August number of the *Bulletin de la Société astronomique de France* (p. 356) M. Flammarion gives fuller details of the phenomenon, and shows, by means of a diagram, the disposition of the four satellites, in regard to Jupiter, between the hours of 19h. 56m. and 20h. 6m. on the date named. As Jupiter does not rise until after midnight, European observers will not be able to watch this unusual spectacle; it will, however, be visible in Asia and Oceania.

The first observation of this phenomenon was made by Galileo on March 15, 1611, and only on eight occasions since then has it been observed.

LATITUDE-VARIATION AND LONGITUDE DETERMINATIONS.—Part i., vol. ix., of the *Annalen der Sternwarte in Leiden* contains accounts of a series of latitude-variation observations made by Father J. W. J. A. Stein during the period June, 1899, to July, 1900, and of a determination of the difference of longitude between Leyden and Ubagsberg made by the director of Leyden Observatory, Dr. H. G. van de Sande Bakhuyzen, and M. J. H. Wilterdink.

Father Stein employed the Horrebaw method, making 1590 observations on 117 nights. He discusses the observations, the instrument, and the reductions at some length.

Ubagsberg is a geodetic station situated in the province of Limbourg, between Maastricht and Aix-la-Chapelle, and is an important point from the fact of its having been made a station in three distinct triangulations. The difference of longitude between the geodetic pillar at Ubagsberg and the meridian circle at Leyden was found to be +5m. 52.314s. $\pm 0.015s.$

THE COLOURS AND SPECTRA OF STARS.—A paper by Mr. W. S. Franks, appearing in No. 8, vol. lxvii., of the *Monthly Notices (R.A.S.)*, discusses the relation between the colours and spectra of star classes.

He tabulates 1360 stars under colours as observed by members of the B.A.A., and spectra as given in the Harvard publications, and finds, in general, a very close connection between the two features. Of 282 helium stars, 125 belong to the white or O colour class, whilst 168 of the 377 hydrogen stars come under the same heading. On the other hand, 210 of the 241 solar stars come under the colours between Y 2 and Y 3 .

Whilst making the investigation Mr. Franks was impressed by the marked affinity of helium and bright-line stars (types B and O) with the galaxy. All the bright-line spectra met with were in or near the Milky Way, and when one remembers that the Wolf-Rayet stars, all the Novæ, and the majority of short-period variables are also galactical, it is obvious that the Milky Way is, in some way yet undetermined, probably the seat of cosmical actions of primary importance.