



On humopinic acid

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other day the altitudes and azimuths of some of the fundamental stars were observed. The length of the tail is stated to be, on March 6, $42^{\circ} 55'$; on March 7, $37^{\circ} 23'$; and, on March 17, $32^{\circ} 47'$. It is stated also, that on March 8, the colour of the tail had changed, and become more like the rays of the moon: on the 15th it appeared to be much brighter*.

XII. Extract from the Translation of a Letter from Professor Bessel, on the Variations of the Proper Motions of Procyon and Sirius. We have already given this communication in full, in our last Number, p. 256.

LIII. Intelligence and Miscellaneous Articles.

RECENT COMETS.

THE Great Comet of 1845, the discovery of which was announced last month, has since been observed in England; though, owing to its distance from the earth, it had become so faint an object as to escape any but a practised eye, aided by the most powerful instruments. Observations made at Ceylon, Bombay, Madras, and other places in the east, have already been received in this country: astronomers are yet expecting the arrival of those made at the Cape of Good Hope, which will doubtlessly furnish data for the satisfactory determination of the elements of its orbit.

A second telescopic comet was discovered at the Observatory of the Collegio Romano, on the evening of February 25. The positions given by Prof. De Vico are as follows:—

	Rome mean time.			Right ascension.			Declination.		
1845.	h	m	s	h	m	s	h	m	s
Feb. 25.	11	15	39.2	11	44	2.2	+55	5	8.5
26.	7	2	57.6	11	38	8.4	+54	46	43.3

It was observed by Prof. Schumacher on March 15, at $9^{\text{h}} 55^{\text{m}} 36^{\text{s}}$ (Altona mean time). Its right ascension was then $9^{\text{h}} 29^{\text{m}} 46^{\text{s}}.3$, and its declination $+37^{\circ} 5' 44''$.

ON HUMOPINIC ACID. BY M. WÖHLER.

The author gives this name to an acid product analogous to humus, which is produced by the decomposition of narcotina by heat.

When narcotina is heated by an oil-bath in a platina vessel, to some degrees above its melting-point, it begins to become coloured, and eventually assumes a deep reddish-brown; at about 428° it suddenly swells and disengages a very large quantity of ammoniacal gas, nearly pure.

The residue solidifies into a very spongy mass, which, after powdering, is nearly of a pure brown colour; it is essentially composed of humopinic acid.

In order to purify it, the powder must be digested in hydrochloric acid, then washed, and afterwards dissolved in caustic potash, which

* For other observations of this comet, see the preceding volume, p. 341.—*EDIT.*

acquires a deep yellowish-red colour; this solution is to be supersaturated with hydrochloric acid, which precipitates the humopinic acid, resembling in appearance hydrated peroxide of iron. It is to be washed in alcohol, which leaves a light residue of a dull substance.

The alcoholic solution, when dropped gradually into water, forms with it an emulsion of a deep peach-red colour.

By evaporating the alcohol, the humopinic acid remains in the state of a deep brown mass.

The properties of humopinic acid are, that it is an amorphous substance of a deep brown colour. It melts when heated, and burns with flame, and emits an odour of narcotina. It is insoluble in weak acids and in water; the alcoholic solution is of a deep yellowish-red colour. The alkalies dissolve it, forming a saffron-coloured solution. These solutions give deep brown gelatinous precipitates, with the salts of lead and barytes. When this acid is long boiled in water, it becomes insoluble in ammonia, the alkalies and alcohol merely dissolve it with more difficulty, and always leave a blackish-brown insoluble substance, which resembles *humic* perfectly.

It appears by analysis to be composed of,—

Carbon	64·4
Hydrogen	5·1
Oxygen	30·5
	<hr/> 100·

Ann. de Ch. et de Phys., October 1844.

ANALYSIS OF THE METEORIC IRON OF GRASSE.

BY LE DUC DE LEVYNES.

The author states the following as the analyses hitherto published, which show the greatest quantity of nickel in various specimens of meteoric iron :—

Iron of Elbogen, by John, 8·75 per cent. Iron of Hradschina, [Agram] by Wehrle, 8·88; by Holger, 11·84. The Louisiana iron, by Shepard, 9·67. The Potosi, by Morren, 9·75. The Siberia, last analysis by Berzelius, 10·73. Iron from the Cape, by Tennant, 10; by Wehrle, 12·27. The iron from Claiborne, North America, by Jackson, 24·70 per cent.

The Grasse iron did not appear to contain either sulphur, silica or cobalt; it yielded,—

Iron	82·63
Nickel	17·37
	<hr/> 100·

It contained also traces of manganese and copper.—*Annales des Mines*, tome v. 161.

ON COTARNINA. BY M. WÖHLER.

This name is given by the author to a new organic base which is produced along with opianic acid; it contains azote and narcotina. It occurs in the mother-waters from which opianic acid is separated. In order to separate it from the sulphate of manganese and undecom-