

Heuland. Its great resemblance with the arseniate cobalt from the same locality had hitherto caused its being placed with it.

Chemical Examination of Roselite. By J. G. Children, FRS.

In glass matrass, decrepitates and gives off water; the fine deep rose colour changes to black.

With borax, on the platina wire, and in the oxidating flame, the assay dissolves readily, and gives an intensely deep blue glass. In the reducing flame, the colour becomes lighter; no appearance of reduced copper.

With salt of phosphorus on the platina wire, the assay dissolves readily and completely, and gives results similar in both flames to those with borax.

The assay dissolves with facility in muriatic acid, and, after evaporation to dryness, the residuum is wholly soluble in water.

A minute fragment digested in a solution of caustic potash, on a slip of glass, evaporated to dryness, redissolved, and the alkali neutralized with nitric acid, gave with nitrate of silver and ammonia, a brown red precipitate of arseniate of silver.

Another minute fragment gave with a drop of muriatic acid a fine blue solution; by dilution with water, the colour disappeared. A drop of the diluted solution gave an abundant precipitate with oxalate of ammonia.

Another drop, evaporated to dryness on a polished steel blade, left no trace of copper.

Another drop gave with prussiate of potash a yellowish green tint, without any indication of copper.

Another drop, treated with bicarbonate of ammonia and phosphate of soda, gave decided evidence of the presence of magnesia.

These experiments are sufficient to show, that the composition of Roselite consists of arsenic acid, united to oxide of cobalt, lime and magnesia, elements which, according to Phillips (*Mineralogy*, p. 178), constitute the *Picropharmacolite* of Stromeyer, who found their proportions to be :

| | |
|---------------------------|-------|
| Lime | 24.64 |
| Magnesia | 3.21 |
| Arsenic acid | 46.97 |
| Oxide of cobalt | 0.99 |
| Water. | 23.97 |
| | <hr/> |
| | 99.78 |

The whole quantity of Roselite that M. Lévy could afford me for my experiments, consisted of three or four minute crystals, about the size of a small pin's head, so that any attempt to ascertain the relative quantities of the ingredients would have been

absurd. Judging, however, from the results obtained by the blowpipe, and the appearance of the precipitates, the respective quantities of magnesia in Rosélite and Picroparmacolite, in proportion to those of the lime, must be nearly alike, but that of the oxide of cobalt much greater in the former than in the latter mineral. As the results obtained by M. Stromeyer do not well accord with any probable atomic proportions, some error may, perhaps, have crept in, in the course of his analysis, which even his acknowledged ability may have failed to detect.

ARTICLE VII.

On the rapid Descent of the Barometer in Oct. 1824.

By M. P. Moyle, Esq.

(To the Editors of the *Annals of Philosophy*.)

GENTLEMEN,

Helston, Oct. 30, 1824.

BEING struck with the rapid descent of the barometer in the early part of this month, and its accompaniment by a thunder storm, I take the liberty in sending you an extract from my meteorological journal on that occasion, and am,

Gentlemen, your obedient servant,

M. P. MOYLE.

| 1824. | Barometer, corrected to 32° Fahr. | Ther. | Hyg. | Wind. | | |
|----------|---|-------|------|-------|------------|----------------------------|
| Oct. 9. | | | | | | |
| 9 a. m. | 29.6820 | 55 | 93 | NW | Gentle | Very fine |
| 3 p. m. | 29.7127 | 59 | 82 | W | Brisk | Showery |
| 10 p. m. | 29.6664 | 58 | 96 | W | Gentle | Cloudy |
| Oct. 10. | | | | | | |
| 8 a. m. | 29.2640 | 56 | 98 | SE | Very brisk | Rain |
| 2 p. m. | 28.1160 | 59 | 83 | NW | Ditto | Fine |
| 5 p. m. | 28.9905 | 56 | 86 | S | Ditto | Cloudy |
| 8 p. m. | 28.9007 | 55 | 91 | S | Ditto | Clear |
| 10 p. m. | 28.8150 | 55 | 90 | S | Stormy | Cloudy |
| midnight | 28.7647 | 55 | | SW | Stormy | Heavy rain, lightning, &c. |
| Oct. 11. | | | | | | |
| 4 a. m. | 28.4089 | 57 | 92 | SW | Boisterous | Thunder and lightning |
| 8 a. m. | 28.4076 | 57 | 91 | SW | Ditto | Showery |
| 11 a. m. | 28.6620 | 57 | 65 | S | Fresh | Slight showers |
| 3 p. m. | 28.7921 | 48 | 86 | E | Ditto | Showery |
| 10 p. m. | 29.1166 | 49 | 93 | E | Very fresh | Showery |