

Having recently had occasion to prepare some silicon, precipitated silica was heated with magnesium powder in a Hessian crucible. One quarter gram-molecule of each was employed. The heating had proceeded some little time when suddenly the mixture exploded with terrific violence, shattering the crucible to a powder and sending out a great sheet of white flame. So great was the force of the explosion that the iron ring of the retort stand which held the crucible was bent out of shape. On examination it was found that the ingredients were pure, except that they might not have been quite free from moisture.

What I wish particularly to point out is that there is not a word in any of the text-books I have referred to of the danger of a very serious explosion in the above preparation.

Perhaps someone can say, definitely, whether the presence of a trace of water will cause such a mixture to explode on heating.

F. H. POWER.

Lincoln Grove, Radcliffe-on-Trent, Notts,
January 26.

Intermittent Glow of the Tail of the New Comet.

IN Mr. Rolston's interesting and valuable article on the new comet (*Nature*, January 27) reference is made to the statement of the Rev. F. J. Jervis-Smith that several persons observing at Lymington on January 22 thought the tail appeared to flash slightly and continuously.

Now, on the evening of that day I got the impression, on seeing the comet setting in the west-south-west, that there was an intermittent glow of the tail matter, in no very marked degree, it is true, but still there was a seeming perceptibility.

Later that evening I was told by an unskilled observer that he had seen "faint lights issue from the head and pass up to the end of the tail."

The conclusion I came to at the time exactly coincides with that referred to in the article, which is that the appearance was referable to the low position of the object and consequent atmospheric effects.

The interposition between the observer and the tail of a slight cloud or of some distant mass of smoke, though in itself too filmy to be noticed from afar off against a dark sky, would, doubtless, account for these light changes.

A correspondent once wrote to me—in some alarm, I thought—that Jupiter had on the previous evening behaved in a manner which was, to say the least, extraordinary, in that it had "kept going in and out" for five minutes on end. As the planet was then low in the sky, I concluded that the effect described by my perturbed correspondent was due to rapidly moving patches of unseen denser vapour than that which surrounded the planet, intruding in the line of sight. At the same time, I was far from being unmindful of the way in which Jupiter's light will frequently palpitare when the planet is nearing the horizon.

J. H. ELGIE.

72 Grange Avenue, Leeds, January 28.

Unemployed Laboratory Assistants.

A NUMBER of lads who have been employed as laboratory monitors in secondary schools, and whom the London County Council are unable to retain in their service beyond the age of sixteen years, have been referred to us by the London County Council with the view of our placing them. Some of them we have already been able to place in suitable employment, but there are still one or two on our books for whom we seek situations.

They all have an elementary knowledge of physics and chemistry. Some have learned glass-blowing and bending, and one of the applicants has already passed the Board of Education examination in chemistry (Stage I.). If any readers of *NATURE* would like to have further particulars of these boys, I should be glad to supply them with information.

GODFREY REISS (*Hon. Sec.*).

Apprenticeship and Skilled Employment Association,
36 Denison House, 296 Vauxhall Bridge Road,
London, S.W., January 31.

NO. 2101, VOL. 82]

THE AROLLA PINE.¹

THE Arve or Arolla pine is the most beautiful of Alpine conifers. The glossy green of its acicular tufted leaves, the curving cone of its outline, the combined strength and grace of its growth, make it yet more attractive in colour and in form than the darker and sturdier spruce. It ranges, though rather fitful and sporadic in distribution, throughout the Alpine chain, passing on to the Carpathians, where, however, it does not grow nearly so high above the sea-level, but it is most abundant in north-eastern Asia, which is apparently its birthplace. There it extends northward to the tree-limit, eastward to the Altai, the Sea of Okhotsk, and the north of Japan, and westward even so far as the Lower Dwina. Between the occupants of these two provinces some marked differences exist, so that Dr. Rikli recognises an Arctic and an Alpine subspecies, to the latter of which his memoir is re-



FIG. 1.—The Arve in Youth.

stricted. The Arve is a lover of the mountains, and on these it has a rather wide vertical range. When growing wild it is seldom met with below the 1350-metre contour-line. Dr. Rikli mentions as the lowest instance one at about 1200, near Raron, in the Upper Rhone valley. Its upper limit is about 2400 metres, the highest occurrence on record being 2585 metres, on the Plattje, near Saas Fee. Such cases, however, are exceptional, where the tree obviously has had a hard struggle for existence, and it cannot be said to flourish above 2300 metres. On the Northern range of the Alps, the vertical limits within which it grows freely are narrower than in the Central—or Pennine and Lepontine—range, the difference between them, in

¹ Die Arve in der Schweiz. Ein Beitrag zur Waldgeschichte und Waldwirtschaft der Schweizer Alpen von Dr. M. Rikli. Mit einer Arvenkarte der Schweiz, einer Waldkarte von Davos, 19 Spezialkarten in Lithographie, 9 Tafeln in Lichtdruck und 51 Textbildern. (Neue Denkschriften der Schweizerischen Naturforschenden Gesellschaft, Band xliv.) Pp. xi+455. (Basel : Georg & Cie.; Zürich : Zürcher & Furrer, 1909.)