but are an indirect result of the germinal instability occasioned by crossing in the ancestry.

It is to be hoped that further study of this new series of forms, with particular regard to the manner of origin of the mutant types, together with crossing experiments with the *O. Lamarckiana* series, will throw further light upon the nature of the mutation processes in Oenothera. R. R. GATES.

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William Herschel and his "Desertion."

IN the valuable discourse on Sir William Herschel delivered at the Royal Institution on April 26 by Sir George Darwin, the well-known story of the desertion of the young bandsman from the Hanoverian Guards has been alluded to (NATURE, August 15, p. 620). A week or two after the delivery of this discourse the "Scientific Papers of Sir William Herschel" were published by the Royal Society and the Royal Astronomical Society, and in the introduction to that work there is given a detailed account of how Herschel left the army, written by himself and corroborated by the still existing official discharge, signed by the colonel of the Guards in 1762. As many readers of NATURE may not come across that work, it may be of use to give a summary of the facts here.

After the battle of Hastenbeck (July, 1757) young Herschel (eighteen years of age) left the army and went home to Hanover, on the suggestion of his father. But on his arrival there he found that as a non-combatant he was liable to be pressed into the army at any moment. He therefore at once (or very soon) returned to his regiment, putting on his uniform again (not taking it off, as stated) when he had passed the sentries at Herrenhausen. He remained with the army till the following September, when he finally left it, as his father pointed out to him that there could be no objection to his doing so, since he had not taken the oath when he joined the band as a boy of fourteen. He then went straight to Hamburg without going home first, and proceeded to England, where he had spent five or six months in the previous year and where he wished to settle. In March, 1762, he obtained a formal discharge, which is now printed in my above-mentioned introductory memoir. The story, originally published by Airy on the authority of the Duke of Sussex, that George III. in 1782 handed Herschel a formal "pardon," must therefore have been due to some misunderstanding or other.

J. L. E. DREYER.

Armagh Observatory, August 23.

The Disintegration of Metals at High Temperatures.

DURING experiments on the disintegration of metals, particularly those which are not supposed to combine directly with oxygen, such as certain metals of the platinum group, I have found the disintegration to be due to the direct formation of an oxide. The loss of weight of a hot platinum wire, for instance, is zero in nitrogen, in hydrogen, and in a vacuum. By means of an expansion apparatus, all metals tried are found to give nuclei when oxygen is present, but not when it is absent, either in other gases or in a vacuum. The occluded gases come off in a vacuum in molecular aggregations, but there is no evidence that they bring particles of the metal with them. The loss of weight cannot be due to volatilisation, as it diminishes with diminution of pressure of surrounding oxygen.

By weighing experiments, the weight of oxygen absorbed and of platinum lost correspond to the formation of a hitherto unknown oxide of platinum. This oxide is deposited upon the walls of the containing vessel as a black powder; on being heated it turns to the metal, producing a platinum mirror. Microscopic examination does not reveal any evidence of crystals, either in the black powder or in the mirror. If, however, a piece of glass having such a deposit, and having been heated in different places, is boiled in aqua regia, the parts where the metallic mirror has been formed by heating become clear very quickly, whilst the black powder, where it has not been heated, remains unaffected. J. H. T. ROBERTS.

University of Liverpool, August 20.

September Meteor-showers.

THE following meteor-showers become due during the month of September:—

Epoch September 4, 19h. 30m. (G.M.T.), nineteenth order of magnitude. Principal maximum, September 4, 6h. 10m.; secondary maxima, September 3, 7h. 40m., and September 4, 18h.

Epoch September 7, 3h. 30m., approximately first order of magnitude. Principal maxima, September 6, 2h. 15m., and September 7, 21h. 5m.; secondary maxima, September 7, 12h. 30m., and September 8, 20h. 40m.

Epoch September 7, 2h., approximately first order of magnitude. Principal maximum, September 6, 6h. 30m.; secondary maxima, September 5, 11h. 20m., and September 6, 23h. 55m.

Epoch September 9, 15h. 30m., approximately seventeenth order of magnitude. Principal maximum, September 7, 22h. 50m.; secondary maximum, September 9, 13h.

Epoch September 9, 14h., sixteenth order of magnitude. Principal maximum, September 8, 10h. 15m.; secondary maximum, September 8, 2h. 35m.

Epoch September 12, 20h., thirty-fifth order of magnitude. Principal maxima, September 9, 18h. 25m., and September 11, 14h. 30m.

Epoch September 8, 17h. 30m., approximately seventeenth order of magnitude. Principal maxima, September 9, 22h. 45m., and September 11, 18h. 45m.; secondary maximum, September 9, 8h. 34m.

Epoch September 16, 8h., sixteenth order of magnitude. Principal maxima, September 13, 10h. 30m., and September 15, 6h. 35m.; secondary maximum, September 15, 14h. 30m.

Epoch September 14, 22h. 30m., eleventh order of magnitude. Principal maximum, September 13, 22h. 25m.; secondary maxima, September 12, 12h. 50m., September 13, 18h. 30m., and September 14, 8h. 50m.

Epoch September 16, 9h. 30m., twelfth order of magnitude. Principal maximum, September 14, 16h. 50m.; secondary maximum, September 16, 4h. 55m.

Epoch September 15, 4h. 30m., tenth order of magnitude. Principal maximum, September 14, 20h. 45m.; secondary maximum, September 13, 0h. 40m.

Epoch September 14, 15h., eleventh order of magnitude. Principal maxima, September 15, 18h. 25m., and September 17, 14h. 25m.; secondary maximum, September 17, 2h. 35m.

Epoch September 19, 21h. 30m., approximately seventh order of magnitude. Principal maximum, September 21, 2h. 35m.; secondary maxima, September 20, 8h. 45m., and September 21, 6h. 30m.

Epoch September 21, 9h. 30m., third order of magnitude. Principal maximum, September 22, 22h. 35m.; secondary maxima, September 23, 2h. 30m., and September 24, 22h. 25m.

Epoch September 25, 15h. 30m., fourteenth order of magnitude. Principal maximum, September 23