

acid. After six weeks in the tank it was found that all the bones had been freed of matrix, and detail was clearly visible. The pungent odour of acetic acid caused difficulty, and it has been found that a 10 per cent solution of formic acid is just as effective. Specimens of Old Red Sandstone ostracoderms have been treated with formic acid with striking results.

Differential Corrections of Orbits of Comets

A PAPER by J. G. Porter on "Differential Corrections of Orbits" (*Mon. Not. Roy. Astro. Soc.*, 109, 4; 1949) develops a simplified method for applying differential corrections to certain elements in the orbits of comets and minor planets. Schönfeld's well-known method, adapted for logarithmic computation, involves six unknowns in the normal equations, and the work entailed in the solution of these is laborious. Tietjen showed that the problem could be considerably simplified by a suitable choice of axes, and Porter's method is virtually an adaptation of that of Tietjen to computing machines. The ecliptic elements, ω , Ω and i , which enter into Schönfeld's equations, are no longer necessary, and the computations can be effected by the use of certain equatorial constants. All who are interested in the computations of orbits should study this important paper, the details of which are too long to be dealt with here. The application of the method is illustrated for Comet Pons-Winnecke (1945a), and the computations are obviously much simpler than in some of the methods previously used. A computer equipped with a computing machine will find no difficulty in utilizing the new scheme, even if he cannot follow *in toto* the method for deriving the different formulæ.

Museum Schools Service in Wales

MUSEUMS all over Great Britain are now realizing their responsibilities to schools and are organising their resources so that their contribution to formal education may be of the highest value. The National Museum of Wales is no exception to this general trend; and the forty-second annual report for 1948-49 of this institution (pp. 57+2 plates; Cardiff: National Museum of Wales, 1949) states that the five-year scheme for a Museum schools service is now in its second year and has begun to take shape. It was decided at an early stage that the persons appointed in connexion with the scheme should be concerned with subjects falling within the school curriculum—one on the arts and the other on the science side. It was also considered desirable that each appointment should be associated with one department of the Museum only. The qualifications of the applicants did not make it possible to implement fully this policy, but one appointment has been made to the Department of Archaeology and another to that of Geology. Those appointed are now acquainting themselves with the resources and methods of their respective Departments and have examined the work of other centres where museum schools services are in operation. A representative Museum Schools Service Committee has been appointed, and, although a large amount of preliminary work has been accomplished, it is apparent that it will be a considerable time before the effect of this schools service is felt in the Principality of Wales.

Colonial Service: Recent Appointments

THE following appointments in the Colonial Service have recently been announced: M. D.

Ffrench-Mullen (agricultural officer, Fiji), chief research officer, British Guiana; W. A. Wright (agricultural officer, Sierra Leone/Gambia), agricultural officer, Kenya; K. R. M. MacDonald (senior assistant conservator of forests, Nigeria), conservator of forests, Nigeria; C. J. W. Pitt (assistant conservator of forests, Tanganyika), assistant conservator of forests, Sierra Leone; P. C. Randell (assistant conservator of forests, Nigeria), senior assistant conservator of forests, Nigeria; R. G. M. Willan (assistant conservator of forests, Nyasaland), conservator of forests, Nyasaland; R. B. McConnell (senior geologist, Nigeria), assistant director, Geological Survey, Uganda; A. K. N. Chhung Hin (pathologist, Mauritius), senior pathologist, Mauritius; H. K. Littlewood (senior veterinary officer, Nigeria), assistant director, veterinary services, Nigeria; M. R. Henderson (assistant director of botanical gardens, Singapore), director of botanical gardens, Singapore; D. C. Lorimer (laboratory superintendent, Nigeria), senior laboratory superintendent, Nigeria; K. Twum-Barima, agricultural officer, Gold Coast; C. G. Birch, agricultural officer, Tanganyika; J. L. Gregory, entomologist, Nigeria; G. Jackson, agricultural officer (ecologist), Nyasaland; A. R. Maurer, botanist, Nigeria; K. Coe and J. F. Sawage, geologists, Gold Coast; G. R. Davis and J. R. F. Handley, geologists, Tanganyika; R. G. Dodson, geologist, Kenya; J. G. Prescott, veterinary research officer, Tanganyika; H. R. Clifford, veterinary officer, Uganda; G. G. T. Harrison, fisheries officer, Gold Coast; H. H. J. Lambert, geophysicist, Northern Rhodesia; F. C. B. Marshall, chemist, Joint Department of Chemistry, Federation of Malaya; J. R. Scott, meteorological officer, Federation of Malaya; J. B. Smith, assistant meteorologist, Gold Coast; J. Sommerville, agricultural development officer, Nigeria; G. W. Walker, chemist, Government Chemist Department, Tanganyika.

The Night Sky in May

FULL moon occurs on May 2d. 05h. 19m., U.T., and new moon on May 17d. 00h. 54m. The following conjunctions with the moon take place: May 10d. 04h., Jupiter 2° N.; May 13d. 02h., Venus 2° S.; May 25d. 15h., Saturn 0.1° N.; May 26d. 12h., Mars 0.02° N. Mercury is an evening star in the early part of the month, setting 1h. 40m. after the sun on May 1, but later in the month it becomes a morning star and on May 31 rises 25m. before the sun. Venus is a morning star, rising more than an hour before the sun throughout the month, but is not visible for long as it is lost in the twilight. Mars, in the constellation of Leo, is visible throughout the night and does not set until the morning hours. The planet is stationary on May 5, after which its eastward movement brings it close to β Virginis towards the end of the month. Jupiter is a morning star, rising at 2h. 45m. and 0h. 55m. on May 1 and 31, respectively, and can be seen for a short time before sunrise, but it is too low for good observation. Saturn sets about the same time as Mars and is a little to the north of the latter; the ring, now opening up, can be easily seen even with a small telescope. During May there are no occultations of stars brighter than magnitude 6. In the early part of the month the η Aquarid meteors are active, but moonlight will interfere with ordinary observations. This drawback is now overcome by the use of radar, which has been responsible for very important work on the Aquarids and other showers.