

made in the art of gold extraction. So far as possible, account has been taken of all important processes in bringing the book up to date.—Dr. David Walsh's volume on "The Röntgen Rays in Medical Work" (Baillière, Tindall, and Cox) contains much information of interest to all who desire to know how far Röntgen rays have been utilised in medical and surgical cases. To the physician and surgeon this second edition should be of great service in showing what has been done. Referring to the progress made since the publication of the first edition, Dr. Walsh says: "In practical work the times of exposure are shorter, results more certain, and the merits of the static machine more widely recognised."—A second edition of "A Text-book of Applied Mechanics," by Prof. Andrew Jamieson, has been published by Messrs. Charles Griffin and Co., Ltd. This book has been revised and extended, the chief additions being in the part on hydraulics and hydraulic machines.—The case for cremation as a means of disposing of the dead is forcibly stated by Sir H. Thompson in "Modern Cremation" (Smith, Elder, and Co.), the third edition of which, revised and much enlarged, has just been published. The volume brings up to the present date the history of the practice of cremation, and of the work of the Cremation Society of England.

THE additions to the Zoological Society's Gardens during the past week include a Tantalus Monkey (*Cercopithecus tantalus*) from West Africa, presented by Mr. W. Knight; two Hairy Armadillos (*Dasybus villosus*), a Geoffroy's Cat (*Felis geoffroyi*) from La Plata, presented by Mr. W. Brown; a Magpie (*Pica rustica*), British, presented by Mr. S. B. Goldsmith; a Red-eared Bulbul (*Pycnonotus jocosus*), a Yellow-bellied Liothrix (*Liothrix luteus*) from India, presented by Miss Petrocochino; two Goshawks (*Astur palumbarius*), European, presented by M. P. A. Pichot; three Spotted Tinamous (*Northura maculosa*) from Buenos Ayres, four Rufous Tinamous (*Rhynchotus rufescens*) from Brazil, presented by Mr. Ernest Gibson; two Black-eared Marmosets (*Hapale penicillata*) from South-east Brazil, two Maholi Galagos (*Galago maholi*) from South Africa, a Sooty Phalanger (*Trichosaurus fuliginosus*) from Tasmania, a Malabar Squirrel (*Sciurus maximus*, var. *dealbatus*) from India, a Long-necked Chelodine (*Chelodina longicollis*) from South Australia, two Serrated Terrapins (*Chrysemys scripta*) from North America, deposited; a Grison (*Galictis vittata*) from South America, two Superb Tanagers (*Calliste fastuosa*), a Blue and Black Tanager (*Tanagraella cyanomelaena*) from Brazil, a Thick-billed Tanager (*Euphonia lanirostris*) from Central America, purchased; a Common Mynah (*Acridotheres tristis*) from India, received in exchange.

OUR ASTRONOMICAL COLUMN.

HOLMES' COMET, 1899 *d* (1892 III.).—A new ephemeris for this comet is given by Mr. H. J. Zwiers in *Astr. Nach.* (Bd. 150, No. 3582). It is important that as many observations as possible should be secured, in order to provide the necessary data for a more correct determination of the orbit.

Ephemeris for 12h. Greenwich Mean Time.

1899.	h.	m.	R.A.	Decl.	Br.	($r\Delta$)-2.
Aug. 10	...	2	43 48'80	..	34 39 46"4	
11	...	44	56'27	...	34 55 39'6	
12	...	46	2'64	...	35 11 29'8	... 0'1940 ... 0'04674
13	...	47	7'89	..	35 27 16'9	
14	...	48	11'99	...	35 43 0'9	
15	...	49	14'92	...	35 58 41'7	
16	...	50	16'66	...	36 14 19'2	... 0'1923 ... 0'04781
17	...	2	51 17'17	...	36 29 53'4	

COMET SWIFT (1899 *a*).—Observers still interested in this comet, and possessed of the necessary optical means, will find an extended ephemeris in the *Astr. Nach.* (Bd. 150, No. 3583)

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by Herr J. Möller, of Kiel. The positions and relative brightness are given up to September 16, but it is only with the largest instruments that the comet can be at all detected.

THE NEW ALGOL VARIABLE.—In *Harvard College Observatory Circular*, No. 44, Prof. E. C. Pickering gives an ephemeris for observations of this recently discovered variable. The following are the predicted minima during the nights of the present month:—

Heliocentric Minima of B.D. 45°3062.

1899, August 11, at 11h. 43m.

" " " 20, at 15h. 12m.

The position of the star is

R.A. ... 20h. 2'4m. } (1855),
Decl. ... + 45° 53' }

and its normal magnitude about 8.6.

DOUBLE STAR CATALOGUE.—Mr. R. G. Aitken has communicated to the *Astr. Nach.* (Bd. 150, Nos. 3584-5) his observations of 319 double stars made during the year 1898. The measures were made with the filar micrometer, in conjunction with either the 12-inch or 36-inch refractor, at the Lick Observatory. The star places are all reduced to epoch 1900, and the data given are time of observation, position angle, distance of components, and their individual magnitudes.

ELEMENTS OF COMETARY ORBITS.—M. G. Fayet has extended Oppolzer's "Traité des Orbites," and brought it up to date by giving the approximate elements for the year 1900 of all the comets hitherto observed. The list is divided into three portions, dealing with comets having elliptic, parabolic, and uncertain orbits respectively; 106 comets are given with elliptic elements, and 104 with parabolic elements, the dates of observation extending from 1702 to the present time. Fifty-one comets of uncertain elements are given, extending from 137 B.C. to 1880. This list of cometary elements will be especially useful in referring to the elements of any new comet, to see if it is really a new member of the solar system or a return of one previously recorded.

THE FUR-SEAL HERDS OF THE NORTH PACIFIC.

FEW commercial industries command a more varied or more widely spread series of interests than does the sealing trade of the North Pacific. In addition to the great biological interest attaching to the seal-herds, we have, first of all, a considerable number of Aleuts dwelling on the islands to drive, kill, and skin the seals, and who subsist to a certain extent on seal-flesh. Then there is the revenue drawn by the American and Russian Governments for the right of sealing on their respective islands, as well as the Customs dues levied by the former on the dressed seal-skins when re-imported into their territory. Not to mention the transport of the raw hides, the dressing of the latter and their conversion into commercial seal-skin forms a very important industry in London, which employs a large number of hands. There are, moreover, the vessels and their crews, which have of late years been engaged in pelagic sealing; a large proportion of which sailed from Canadian ports. Finally, there is the manufacture of the finished seal-skin into garments, and the retail sale of the latter.

From all points of view a cordial welcome should, therefore, be extended to the issue by the United States Government of the official Report of the Commissioner in charge of the fur-seal investigations of 1896-97. This Report, which bears the title of "The Fur-Seals and Fur-Seal Islands of the North Pacific Ocean," is in two parts, and comprises the final results of the investigations carried on by the Commissioner and his associates, as well as the recommendations jointly formulated by the American and British members of the International Commission.

The fur-seals of the Northern Pacific comprise three distinct herds, which are stated to keep strictly apart from one another, having each their own breeding-places, feeding-grounds, and routes of migration. The most important of the three herds is the one resorting for breeding purposes in summer to the islands of St. Paul and St. George in the Pribyloff group, situated on the eastern side of Bering Sea. In winter this herd