of his own, in his 'Brief Assertion' (1660) of the annular character of the Saturnian appendages against the objections of Eustachio Divini. Ball joined the meetings of the 'Oxonian Society' at Gresham College in 1659, co-operated in founding the Royal Society in the following year, and was named, in the charter of 15 July 1662, its first trea-On his resignation of this office, 30 Nov. 1663, he promised, and subsequently paid to the funds of the society, a donation of 100l. (Weld, Hist. Royal Soc. i. 171). Soon after 15 June 1665, when he was present at a meeting of the Royal Society (BIRCH, Hist. Royal Soc. i. 439), he appears to have left London, and resumed his astronomical pursuits at his father's residence, Mamhead House, Devonshire, about ten miles south of Exeter. Here, at six P.M. 13 Oct. 1665, he made, in conjunction with his brother, Peter Ball, M.D., F.R.S., an observation which has acquired a certain spurious celebrity. described it in the following sentence of a letter to Sir Robert Moray, which was accompanied by a drawing; the words were inserted in No. 9 of the 'Philosophical Transactions' (i. 153):

'This appear'd to me the present figure of Saturn, somewhat otherwise than I expected, thinking it would have been decreasing; but I found it full as ever, and a little hollow above and below. Whereupon,' the report continues, 'the person to whom notice was sent hereof, examining this shape, hath by letters desired the worthy author of the "Systeme of this Planet" [Huygens] that he would now attentively consider the present figure of his anses or ring, to see whether the appearance be to him as in this figure, and consequently whether he there meets with nothing that may make him think that it is not one body of a circular figure that

embraces his diske, but two.'

Owing to some unexplained circumstance, the plate containing the figure referred to was omitted or removed from the great majority of copies of the 'Philosophical Transactions,' and the letterpress standing alone might naturally be interpreted to signify that the brothers Ball had anticipated by ten years Cassini's dis-covery of the principal division in Saturn's ring. This merit was in fact attributed to them by Admiral (then Captain) Smyth in 1844 (A Cycle of Celestial Objects, p. 51), and his lead was followed by most writers on astronomical subjects down to October 1882, when Mr. W. T. Lynn pointed out, in the 'Observatory,' the source of the misconception. In the few extant impressions of the woodcut from Ball's drawing not the slightest indication is given of separation into two

concentric bodies, but the elliptic outline of the wide-open ring is represented as broken by a depression at each extremity of the minor axis. Sir Robert Moray's suggestion to Huygens seems (very obscurely) to convey his opinion that these 'hollownesses' were due to the intersection of a pair of crossed Their true explanation is unquestionably that Ball, though he employed a 38-foot telescope with a double eyeglass, and 'never saw the planet more distinct,' was deceived by an optical illusion. The impossible delineations of the same object by other observers of that period (see plate facing p. 634 of Huygens's Op. Varia, iii.) render Ball's error less surprising. Indeed, it was anticipated at Naples in 1633 by F.. Fontana (Novæ Observationes, p. 130; see Observatory, No. 79, p. 341).

Pepys tells us (Bright's ed. v. 375) that Ball accompanied him and Lord Brouncker to Lincoln's Inn to visit the new Bishop of Chester (Wilkins) 18 Oct. 1668, and he was one of a committee for auditing the accounts of the Royal Society in November following. He succeeded to the family estates on his father's death in 1680, and erected a monument to him in the little church of Mamhead. He died in 1690, and was buried in the Round of the Middle Temple 22 Oct. of that year (Temple Register; cf. Letters of Administration P. C. C., by decree, 14 Jan. 1692). He married Mary Posthuma Hussey, of Lincolnshire, who survived him, and had by her a son, William. The last of the Balls of Mamhead died 13 Nov. 1749.

Prince's Worthies of Devon (1701), 111-3; Polwhele's Hist. of Devonshire (1797), ii. 155-7; Watt's Bibl. Brit. i. 67; Prof. J. C. Adams (Month. Not. Royal Astr. Soc. Jan. 1883, pp. 92-7) attempts to prove that Ball's observation was misrepresented, both in the plate (cancelled, as he suggests, on that account) and in the letterpress of Phil. Trans. See, on the other side, Vivian in Month. Not. March 1883, and Lynn, in Observatory, 1 June and 1 Oct. 1883. Prof. Bakhuysen of Leyden gives, Observatory, 2 July 1883, the passage from Moray's letter to Huygens referred to in Phil. Trans. i. 153. Huygens's reply has not yet been brought to light.] A. M. C.

BALLANDEN. [See Bellenden.]

BALLANTINE, JAMES (1808-1877), artist and man of letters, born at Edinburgh in 1808, was entirely a self-made man. His first occupation was that of a housepainter. He learned drawing under Sir William Allen at the Trustees' Gallery in Edinburgh, and was one of the first to revive the art of glass-painting. In 1845 he

published a treatise on 'Stained Glass, showing its applicability to every style of Architecture,' and was appointed by the royal commissioners on the fine arts to execute the stained-glass windows for the House of Lords. He was the author of several popular works: 1. 'The Gaberlunzie's Wallet,' 1843. 2. 'The Miller of Deanhaugh,' 1845. 3. An 'Essay on Ornamental Art,' 1847. 4. 'Poems,' 1856. 5. 'One Hundred Songs, with Music,' 1865. 6. 'The Life of David Roberts, R.A.' 1866. There is also a volume of verses published by Ballantine in Jamaica, whither in later life he seems to have retired for the benefit of his health. 'The Gaberlunzie's Wallet' and some of his songs are still popular in Scotland. He died in Edinburgh in December 1877. He was the head of the firm of Messrs. Ballantine, glass stainers, Edinburgh.

[Athenæum, 22 Dec. 1877; Academy, 29 Dec. 1877; Cooper's Men of the Time, 1875.] E. R.

BALLANTYNE, JAMES (1772-1833), the printer of Sir Walter Scott's works, was the son of a general merchant in Kelso, where he was born in 1772. His friendship with Scott began in 1783 at the grammar school of Kelso. After mastering his lessons, Scott used to whisper to Ballantyne, 'Come, slink over beside me, Jamie, and I'll tell you a story;' and in the interval of school hours it was also their custom to walk together by the banks of the Tweed, engaged in the same occupation. Before entering the office of a solicitor in Kelso, Ballantyne passed the winter of 1785-6 at Edinburgh University. His apprenticeship concluded, he again went to Edinburgh to attend the class of Scots law, and on this occasion renewed his acquaintance with Scott at the Teviotdale club, of which both were members. In 1795 he commenced practice as a solicitor in Kelso, but as his business was not immediately successful he undertook in the following year the printing and editing of an antidemocratic weekly newspaper, the 'Kelso Mail.' A casual conversation with Scott, in 1799, led to his printing, under the title of 'Apologies for Tales of Terror,' a few copies of some ballads which Scott had written for Lewis's Miscellany, 'Tales of Wonder.' So pleased was Scott with the beauty of the type, that he declared that Ballantyne should be the printer of the collection of old Border ballads, with which he had been occupied for several years. They were published under the title of 'Minstrelsy of the Scottish Border,' the first two volumes appearing in Jan. 1802; and the connection thus inaugurated between author and printer remained uninterrupted through 'good and bad weather' to the close of Scott's life.

Induced by the strong representations of Scott, Ballantyne, about the close of 1802, removed to Edinburgh, 'finding accommodation for two presses and a proof one in the precincts of Holyrood House.' Scott, besides advancing a loan of 500l., exerted himself to procure for him both legal and literary printing; and such was the reputation soon acquired by his press for beauty and correctness of execution that in 1805 the capital at his command was too small to fulfil the contracts that were offered him, and he applied to Scott for a second loan, who thereupon became a third sharer in the business. In 1808 the firm of John Ballantyne & Co., booksellers, was also started, Scott having one half share, and James and John Ballantyne one fourth each. John Ballantyne [q.v.] undertook the management of the bookselling and publishing business, the printing business continuing under the superintendence of the elder brother; but the actual head of both concerns was Scott, who, although in establishing them he was actuated by a friendly interest in the Ballantynes, wished both to find a convenient method of engaging in a commercial undertaking without risk to his status in society, and also as an author to avoid the irksome intervention of a publisher between him and the reading public. The publishing business was gradually discontinued, but the printing business was in itself a brilliant success. The high perfection to which Ballantyne had brought the art of printing, and his connection with Scott, secured such enormous employment for his press that a large pecuniary profit was almost an inevitable necessity. though not deficient in natural shrewdness, he was careless in his money transactions, and it was the artistic and literary aspect of his business that chiefly engaged his interest. Much of his time was occupied in the correction and revision of the proofs of Scott's works, the writing of critical and theatrical notices, and the editing of the 'Weekly Journal,' of which, along with his brother, he became proprietor in 1817. Scott's hurried method of composition rendered careful inspection of his proofs absolutely necessary, but the amendments of Ballantyne had reference, in addition to the minor points of grammar, to the higher matters of taste and style. Though himself a loose and bombastic writer, he had a keen eye for detecting solecisms, inaccuracies, or minute imperfections in phrases and expressions, and his hints in regard to the general treatment of a subject were often of great value. If Scott

seldom accepted his amendments in the form suggested, he nearly always admitted the force of his objections, and in deference to them frequently made important alterations. Indeed, it is to the criticism of Ballantyne that we owe some of Scott's most vivid epithets and most graphic descriptive touches. (For examples, see LOCKHART'S Life of Scott, chap. xxxv.) Love of ease and a propensity to indulgence at table were the principal faults of Ballantyne. On account of the grave pomposity of his manner Scott used to name him 'Aldiborontiphoscophornio,' his more mercurial brother being dubbed 'Rigdumfunnidos.' In 1816, Ballantyne married Miss Hogarth, sister of George Hogarth, the author of the 'History of Music.' He lived in a roomy but old-fashioned house in St. John Street, Canongate, not far from his printing establishment. There, on the eve of a new novel by the Great Unknown, he was accustomed to give a 'gorgeous' feast to his more intimate friends, when, after Scott and the more staid personages had withdrawn, and the 'claret and olives had made way for broiled bones and a mighty bowl of punch,' the proof sheets were at length produced, and ⁷ James, with many a prefatory hem, read aloud what he considered as the most striking dialogue they contained.'

The responsibility of Ballantyne for the pecuniary difficulties of Sir Walter Scott has been strongly insisted on by Lockhart, but this was not the opinion of Scott himself, who wrote: 'I have been far from suffering from James Ballantyne. I owe it to him to say that his difficulties as well as his advantages are owing to me.' Doubtless the printing-press, with more careful superintendence, would have yielded a larger profit, but the embarrassments of Scott originated in his connection with the publishing firm, and were due chiefly to schemes propounded by himself and undertaken frequently in opposition to the advice of Ballantyne. 1826 the firm of James Ballantyne & Co. became involved in the bankruptcy of Constable & Co., publishers. After his bankruptcy Ballantyne was employed at a moderate salary by the creditors' trustees in the editing of the 'Weekly Journal' and the literary management of the printing-house, so that his literary relations with Scott's works remained unaltered. He died 17 Jan. 1833, about four months after the death of

[Lockhart's Life of Scott; Refutation of the Misstatements and Calumnies contained in Mr. Lockhart's Life of Sir Walter Scott respecting the Messrs. Ballantyne, 1835; The Ballantyne Vol. III.

Humbug handled by the author of the Life of Sir Walter Scott, 1839; Reply to Mr. Lockhart's pamphlet, entitled 'The Ballantyne Humbug handled,' 1839; Archibald Constable and his Literary Correspondents, 1873.] T. F. H.

BALLANTYNE, JAMES ROBERT (d. 1864), orientalist, after being connected with the Scottish Naval and Military Academy, was sent out to India in 1845, on the recommendation of Professor H. H. Wilson, to superintend the reorganisation of the government Sanskrit college at Benares. The intimate relations he here established with native teachers and students, and the high opinion he formed of the philosophical systems of India, led him to undertake a comprehensive series of works with the design of rendering the valuable elements in Hindu thought more accessible and familiar to European students than they had hitherto been. This was the aim of his translations of the Sanskrit aphorisms of the Sânkhya and many of those of the Nyâya school, with tracts bearing upon these and also upon the Vedânta system. The converse process—the communication of European ideas to the Brahmins—is exhibited in his 'Synopsis of Science, in Sanskrit and English, reconciled with the truth to be found in the Nvâva Philosophy,' and most of his works are filled with the design of establishing more intelligent relations between Indian and European thought. Dr. Ballantyne had an original bent of mind, and his method of dealing with philosophical systems was often suggestive.

The list of his works is as follows: 1. 'A Grammar of the Hindustani Language, 'Edinburgh, 1838, with a second edition. 2. 'Elements of Hindī and Braj Bhākhā Grammar,' London and Edinburgh, 1839. 3. 'A Grammar of the Mahratta Language,' Edinburgh, lithographed, 1839. 4. 'Principles of Persian Caligraphy, illustrated by lithographic plates of the Naskh-Ta'lik character,' London and Edinburgh, 1839. 5. 'Hindustani Selections in the Naskhi and Devanagari character,' Edinburgh, 1840; 2nd edition, 1845. 6. 'Hindustani Letters, lithographed in the Nuskh-Tu'leek and Shikustu-Amez character, with translations,' London and Edinburgh, 1840. 7. 'The Practical Oriental Interpreter, or Hints on the art of Translating readily from English into Hindustani and Persian,' London and Edinburgh, 1843. 8. 'Catechism of Persian Grammar,' London and Edinburgh, 1843. 9. 'Pocket Guide to Hindoostani Conversation,' London and Edinburgh. (The preceding books were published before Dr. Ballantyne went to India.) 10. 'Catechism of Sanskrit Grammar,' 2nd edition, London and Edinburgh,

1845. 11. 'The Laghu Kaumudi, a Sanskrit Grammar, by Varadarája, 1st edition, 1849; 2nd, 1867, posthumous. 12. 'First Lessons in Sanskrit Grammar, together with an Introduction to the Hitopadésa,' 1st edition, 1850; 2nd, 1862. 13. 'A Discourse on Translation, with reference to the Educational Despatch of the Hon. Court of Directors, 19 July 1854, Mirzapore, 1855. 14. 'A Synopsis of Science in Sanskrit and English, reconciled with the Truths to be found in the Nyâya Philosophy,' Mirzapore, 1856. 15. 'The Mahábháshya (Patanjali's Great Commentary on Pánini's famous grammar), with Commentaries, Mirzapore, 1856. 16. Christianity contrasted with Hindu Philosophy, in Sanskrit and English' (a work to which was awarded the moiety of a prize of 300% offered by a member of the Bengal Civil Service, and decided by judges appointed by the Archbishop of Canterbury and the Bishops of London and Oxford), London, 1859.

Dr. Ballantyne also edited and partly wrote a series of educational books for the use of the Sanskrit college. Some of these appeared under the title of 'Reprints for the Pandits,' and included treatises on chemistry, physical science, logic, and art, and an explanatory version, in Sanskrit and English, of Bacon's 'Novum Organon' (1852), which reached a second edition in 1860. 'The Bible for the Pandits' was the title of a translation of the first three chapters of Genesis into Sanskrit, with a commentary

(1860).

In 1861 Dr. Ballantyne resigned his position at the Benares college, where for sixteen years he had been an indefatigable and judicious principal and a liberal professor of moral philosophy, and on his return to England was appointed librarian to the India Office. His health, however, had long been failing, and he died on 16 Feb. 1864. The Benares college owed much to his wise and broad-minded direction, and native students have profited greatly by his zealous labours on their behalf.

[Athenæum, 12 March 1864; Ballantyne's Works, especially advertisement to the Synopsis of Science.] S. L.-P.

BALLANTYNE, JOHN (1774–1821), publisher, younger brother of James Ballantyne, printer of Sir W. Scott's works [q.v.], was born at Kelso in 1774. After spending a short time in the banking house of Messrs. Currie, London, he returned, in 1795, to Kelso, and became partner in his father's business as general merchant. On his marriage in 1797 the partnership was dissolved, one principal

part of the business being resigned to him. Gradually he got into money difficulties, and, having disposed of his goods to pay his debts, went to Edinburgh in January 1806, to become clerk in his brother's printing establishment at a salary of 200l. a year. Scott in 1808, on the ostensible ground of a misunderstanding with Messrs. Constable & Hunter, established the firm of John Ballantyne & Co., John Ballantyne was appointed manager at a salary of 300l. a year and onefourth of the profits. The private memorandum-book of Ballantyne records that already in 1809 the firm was getting into difficulties; and during the next three years their general speculations continued so uniformly unsuccessful, that in May 1813 Scott opened negotiations with Constable for pecuniary assistance in return for certain stock and copyright, including a share in some of Scott's own poems, and on a pledge of winding up the concerns of the firm as soon as possible. Although 'Waverley' was published by Constable in 1814, Scott, owing either, as stated by Lockhart, to the misrepresentations of John Ballantyne regarding Constable, or to the urgent necessity for more ready money than Constable was willing to advance, made arrangements in 1815 for the publication of 'Guy Mannering' by Longman, and in the following year of the 'Tales of my Landlord' by Murray. Lockhart states that Ballantyne, in negotiating with Constable in 1817 regarding a second series of 'Tales of my Landlord,' so wrought on his jealousy by hinting at the possibility of dividing the series with Murray, that he 'agreed on the instant to do all that John shrank from asking, and at one sweep cleared the Augean stable in Hanover Street of unsaleable rubbish to the amount of 5,270l.; 'but from a passage in the 'Life of Archibald Constable' (iii. 98) it would appear that this was not effected till a later period. John Ballantyne, whom Scott continued to employ in all the negotiations regarding the publication of his works, had in 1813, on the advice of Constable, started as an auctioneer chiefly of books and works of art, an occupation well suited to his peculiar idiosyncrasies. As he had also made a stipulation with Constable that he was to have a third share in the profits of the Waverley novels, he suffered no pecuniary loss by the dissolution of the old publishing firm. In addition to this, Scott, in 1820, gratuitously offered his services as editor of a 'Novelist's Library,' to be published for his sole benefit. His easily won gains were devoted to the gratification of somewhat expensive tastes. At his villa on the Firth of Forth, which he had named 'Harmony Hall,' and had 'in-

vested with an air of dainty, voluptuous finery,' he gave frequent elaborate Parisian dinners, among the guests at which was sure to be found 'whatever actor or singer of eminence visited Edinburgh.' He frequented foxhunts and race-meetings, and even at his auction 'appeared uniformly, hammer in hand, in the half-dress of some sporting club.' His imprudent pursuit of pleasure told gradually on his constitution, and after several years of shattered health he died at his brother's house in Edinburgh 16 June 1821. tyne is the author of a novel—'The Widow's Lodgings'—which, though stated by Lockhart to be 'wretched trash,' reached a second edition. In his will he bequeathed to Sir Walter Scott a legacy of 2,000%; but after his death it was found that his affairs were hopelessly bankrupt. In the antics and eccentricities of Ballantyne Scott discovered an inexhaustible fund of amusement; but he also cherished towards him a deep and sincere attachment. Standing beside his newly closed grave in Canongate churchyard, he whispered to Lockhart, 'I feel as if there would be less sunshine for me from this day forth.'

[Lockhart's Life of Scott; Refutation of the Misstatements and Calumnies contained in Mr. Lockhart's Life of Sir Walter Scott respecting the Messrs. Ballantyne, 1835; The Ballantyne Humbug handled by the author of the Life of Sir Walter Scott, 1839; Reply to Mr. Lockhart's pamphlet, entitled 'The Ballantyne Humbug handled,' 1839; Archibald Constable and his Literary Correspondents, 1873] T. F. H.

BALLANTYNE, JOHN (1778-1830). divine, was born in the parish of Kinghorn 8 May 1778; entered the university of Edinburgh in 1795, and joined the Burgher branch of the Secession church, though his parents belonged to the establishment. He was ordained minister of a congregation at Stonehaven, Kincardineshire, in 1805. In 1824 he published 'A Comparison of Established and Dissenting Churches, by a Dissenter.' In 1830 this pamphlet, which had failed to excite notice, was republished with additions during the 'voluntary church' controversy of the period. Ballantyne's partisanship in the controversy is said to have injured the reception of his 'Examination of the Human Mind,' the first part of which appeared in 1828; two further parts were intended, but never appeared. The failure, however, may be accounted for without the influence of party spirit. It is the work of a thoughtful but not very original student of Reid and Dugald Stewart, with some criticism of Thomas Brown. It is recorded that Ballantyne managed to pay for publication out of his own savings, handing over a sum bestowed on

the occasion by a generous patron to some missionary purpose. Ballantyne suffered from indigestion brought on by excessive application, and died 5 Nov. 1830.

[McKerrow's Church of the Secession, pp. 913-16; Recollections by T. Longmuir, Aberdeen, 1872; McCosh's Scottish Philosophy, pp. 388-392.]

BALLANTYNE, THOMAS (1806-1871), journalist, was a native of Paisley, where he was born in 1806. Becoming editor of the 'Bolton Free Press,' he at an early period of his life took an active part in advocating social and political reforms. While editor of the 'Manchester Guardian' he became intimately associated with Messrs. Cobden and Bright in their agitation against the corn laws, and in 1841 he published the 'Corn Law Repealer's Handbook.' Along with Mr. Bright he was one of the four original proprietors of the 'Manchester Examiner,' his name appearing as the printer and publisher. After the fusion of the 'Examiner' with the 'Times,' he became editor of the 'Liverpool Journal,' and later of the 'Mercury.' Subsequently he removed to London to edit the 'Leader,' and he was for a time associated with Dr. Mackay in the editorial department of the 'Illustrated London News.' He also started the 'Statesman,' which he edited till its close, when he became editor of the 'Old St. James's Chronicle.' Notwithstanding his journalistic duties, he found time to contribute a number of papers on social and political topics to various reviews and magazines; in addition to which he published: 1. 'Passages selected from the Writings of Thomas Carlyle, with a Biographical Memoir, 1855 and 1870. 2. 'Prophecy for 1855, selected from Carlyle's Latterday Pamphlets,' 1855. 3. 'Ideas, Opinions, and Facts, '1865. 4. 'Essays in Mosaic,' 1870. Regarding his proficiency in this species of compilation, Carlyle himself testifies as follows: 'I have long recognised in Mr. Ballantyne a real talent for excerpting significant passages from books, magazines, newspapers (that contain any such), and for presenting them in lucid arrangement, and in their most interesting and readable form.' Ballantyne died at London 30 Aug. 1871.

[Sutton's Lancashire Authors, p. 7; Glasgow Daily Mail, 9 Sept. 1871; Paisley Weekly Herald, 11 Sept. 1871.] T. F. H.

BALLANTYNE, WILLIAM (1616-1661), catholic divine. [See BALLENDEN.]

BALLARD, EDWARD GEORGE (1791–1860), miscellaneous writer, was the son of Edward Ballard, an alderman of