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THE

Avicultural Magazine,

BEING THE JOURNAL OF

THE AVICULTURAL SOCIETY

FOR THE STUDY OF

FOREIGN AND BRITISH BIRDS

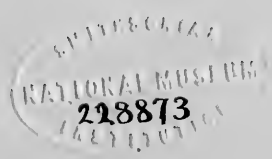
IN FREEDOM AND CAPTIVITY.

EDITED BY

D. SETH-SMITH, F.Z.S., M.B.O.U.

NEW SERIES, VOL. II.

NOVEMBER, 1903, to OCTOBER, 1904.



London :

R. H. PORTER,

7, PRINCES STREET, CAVENDISH SQUARE, W.

1904.

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REPORT OF THE COUNCIL FOR THE YEAR 1903-4.

In presenting the tenth annual volume of the Avicultural Magazine, the second of the new series, it is with much satisfaction, mingled with a feeling of relief, that we are able to announce that, in spite of many difficulties, the high standard attained in the last volume, has been maintained in the present one.

It was found that the funds of the Society did not admit of our giving a coloured plate with each monthly number, unless we reduced the quality of the illustrations, which we considered most undesirable. We have therefore issued eight coloured plates, and all have been of the highest quality. Our artists, Messrs. GRÖNVOLD and GOODCHILD, have admirably accomplished the work entrusted to them.

Besides the coloured plates several good black and white ones have been published, and no monthly number has been without at least one good plate, coloured or otherwise. Messrs. NEWMAN and MEADE-WALDO very kindly defrayed the entire cost of the plates which accompanied their respective articles in the April and July numbers.

As regards the coloured plates for the next volume, we have invited members to suggest suitable subjects, and several good suggestions have been received, which are being carefully considered by the Executive Committee.

Some sixty new members have joined the Society this year, and our membership is now above four hundred; so that in spite of some having deserted us, we may say that our Society is very flourishing.

This year we have had the pleasure of electing as an Honorary Member Dr. F. DUCANE GODMAN, D.C.L., F.R.S., F.Z.S., &c., President of the British Ornithologist's Union, whose devotion to ornithology is well known.

New members have joined us from India, the Argentine Republic, New Zealand, and other distant parts, so that our

connection with abroad is well kept up; while members of older standing, who have returned from abroad, have contributed articles relating their experiences.

Last April we had to announce, with much regret, the resignation of Mr. REGINALD PHILLIPPS from the post of Honorary Business Secretary, which he had most ably held. He has been one of the chief helpers of the Society since it commenced its career ten years ago, both by his literary and pecuniary contributions. We hope that we may soon have some more of his very interesting and instructive articles in our Magazine. The office of Hon. Business Secretary has been filled by Mr. T. H. NEWMAN, F.Z.S.

At the Annual Meeting of the Council, held in June, it was found necessary to revise the Rules, which were thought to be inadequate to the present state of the Society. The matter was very carefully considered, and we believe that as amended they will tend towards better and smoother working of the Society than heretofore.

The sale of the Magazine to non-members for the past year compares favourably with other years, and our Publisher, who is responsible for all numbers sold to the outside public, continues, both by bringing the Magazine before the general notice, and by ably managing all such other business as falls to the lot of a Publisher, to be of great service to the Society.

The finances of the Society have this year caused some anxiety, owing to our desire to keep the present volume up to the highest standard. In order to prevent a serious deficit, we decided, as before mentioned, to have only eight coloured plates this year, and to start a fund to help towards the illustrations. This fund has been most generously supported, and up to the moment of writing £28 ros. 6d. has been received. We take this opportunity of heartily thanking those members whose liberality has set the Society once more on a firm financial basis, and who have shown by their ready response that they have the welfare of the Society at heart. We hope that next year, by increase of our membership, the financial position of our Society may be placed on an even firmer footing; and we would ask all

our members to do their best to make the Magazine known, and to introduce new members.

The past summer has been an exceedingly genial one, and we are not surprised to note that several of our members have done well in breeding rare and interesting birds in their aviaries. A word of especial praise is due to our esteemed Honorary Member, Dr. ALBERT GÜNTHER, M.D., Ph.D., F.R.S., &c., for having succeeded in breeding the Red-backed Shrike. We believe that there is still a considerable field for study offered by the more interesting British and European birds, which are liable to be somewhat neglected on account of the very proper desire to keep the less known foreigners. At the time of writing we hear that Mrs. JOHNSTONE has a fine young Touracou, which is being most carefully tended by its parents, and we look forward with pleasure to the article which is shortly to appear on the subject in our pages.

Finally, we would sincerely thank all those members, whether officers or otherwise, who have worked so well for the Society and its Magazine; we are especially indebted to Mr. ARTHUR GILL for his kindness in giving *Post mortem* reports, and in handing over, for the benefit of the Society, the fees he receives for sending replies by post.

(Signed)

T. H. NEWMAN.

A. G. BUTLER.

E. G. B. MEADE-WALDO.

J. LEWIS BONHOTE.

ROSIE ALDERSON.

F. L. BLATHWAYT.

O. E. CRESSWELL.

JOHN SERGEANT.

CHARLES D. FARRAR.

FRANK FINN.

G. E. SHELLEY.

ARTHUR GILL.

WESLEY T. PAGE.

RUSSELL HUMPHRYS.

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- „ 199, „ 19, *for* terrible *read* horribly.
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- „ 255, „ 30, *for* Green-body-bird *read* Green Tody-bird.
- „ 277, „ 26, *for* clutch *read* click.
- „ 285, „ 1, *for* groups *read* group.
- „ 292, *for* and supplied freely birds, cockroaches, wool, and
moss, *read* and supplied freely birch and other
branches, wool, and moss.

THE PRICE OF THIS NUMBER TO NON-MEMBERS IS 3/-
 NEW SERIES. MONTHLY. NOVEMBER, 1903.

Vol. II. No 1.

Price 1s 6d.

Members' Annual Subscription, 10/-; payable in advance.



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The Subscription to the Avicultural Society is 10/- per annum, due on the 1st of November in each year, and is payable in advance. The entrance fee is 10/6. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

All MSS. for publication in the Magazine (except cases for the Society's Medal), and Books for review, should be addressed to the Editor, Mr. D. SETH-SMITH, Glengarry, Canning Road, Addiscombe, Surrey.

All Queries respecting Birds (except *post mortem* cases) should be addressed to the Honorary Correspondence Secretary, Dr. A. G. BUTLER, 124, Beckenham Road, Beckenham, Kent.

All other correspondence, cases for the Medal, Subscriptions, and Advertisements, should be sent to the Honorary Business Secretary, Mr. R. PHILLIPPS, 26, Cromwell Grove, West Kensington Park, London, W. Any change of address should be at once notified to him.

Advice is given, *by post*, by members of the Council to members of the Society, upon all subjects connected with Foreign and British birds. All queries are to be addressed to the Hon. Correspondence Secretary and should contain a penny stamp. Those marked "Private" will not be published.

The Magazine is published by Mr. R. H. PORTER (7, Princes Street, Cavendish Square, W.) to whom all orders for extra copies, back numbers, and bound volumes (accompanied by remittance) should be addressed.

Cases for binding Vol. I., New Series, of the Magazine (in art cloth, with gold block on side) can be obtained from the Publisher, post free and carefully packed, at 1/6 each; or the Publisher will undertake the binding of the Volume for 2/6, plus 8d. for packing and postage. All orders must be accompanied by a remittance in full; and Members are requested to state whether they want the wrappers and advertisements bound in at the end or not.

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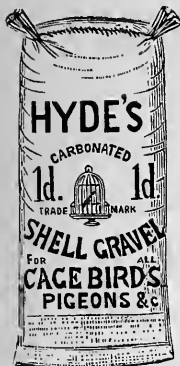
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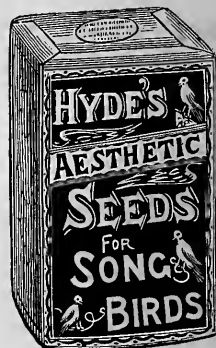
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The date following the Member's name is the date of his election. "Orig. Mem." signifies that the Member joined the Society on its formation in October, 1894. The asterisk denotes that the Member belonged to the U. K. Foreign Cage Bird Society, either at the time of the amalgamation or at some time before.

Honorary Members.

- GÜNTHER, ALBERT, M.A., M.D., F.R.S., F.Z.S., M.B.O.U. ; 2, Lichfield Road, Kew Gardens. (Sept., 1902).
- NEWTON, ALFRED, M.A., F.R.S., F.L.S., F.Z.S., M.B.O.U., Professor of Zoology and Comparative Anatomy in the University of Cambridge ; Magdalene College, Cambridge. (Nov., 1901).
- SCLATER, PHILIP LUTLEY, D.Sc., M.A., F.R.S., M.B.O.U. ; Odiham Priory, Winchfield, Hants. (Sept., 1902).
- SHARPE, RICHARD BOWDLER, LL.D., F.L.S., F.Z.S., M.B.O.U. ; Assistant Keeper, Zoological Department, British Museum (Natural History), South Kensington, S.W. (Sept., 1902).
- TRISTRAM, The Rev. Canon, M.A., LL.D., D.D., F.R.S., C.M.Z.S., M.B.O.U. ; The College, Durham. (Nov., 1903).

The Members.

- ABRAHAMS, FREDERICK M. ; Blandford Cottage, Thames Ditton, and 7, Crown Office Row, Temple, E.C. (May, 1901).
- ABRAHAMS, Mrs. ; 192, St. George Street, E. (May, 1895).
- AGGS, HENRY GURNEY, F.Z.S. ; Pippbrook, Dorking. (Oct., 1897).
- AINLEY, JOHN WILLIAM ; 16, Dalton Green, Dalton, Huddersfield. (June, 1895). *
- ALDERSON, Miss R. ; Park House, Worksop, Notts. (April, 1896).
- ALLBUTT, Mrs. ; 24, Park Square, Leeds. (Jan., 1897).
- ALSTON, GAVIN ; Yondercroft, Darvel, Ayrshire. (June, 1900).
- AMHERST, The Honble. FLORENCE M. T. ; Didlington Hall, Brandon, Norfolk. (Aug., 1903).
- ANNINGSON, Mrs. ; Walt-ham-sal, Barton Road, Cambridge. (May, 1899).
- 10 APLIN, OLIVER VERNON, F.L.S., M.B.O.U. ; Bloxham, Banbury. (Jan., 1902).
- APPLETON, Miss ; Rawden Hill, Arthington, Leeds. (April, 1903).
- ARKWRIGHT, Mrs., Sutton Scarsdale, Chesterfield. (Oct., 1903).

- ARTHUR, CHARLES P.; Market Place, Melksham, Wilts. (Jan., 1895). *
- ASHFORD, Miss; The Birks, Branksome Wood Road, Bournemouth. (Nov., 1896).
- ASTLES, JOHN; 46, Ruskin Road, Crewe. (Jan., 1899).
- ASTLEY, The Rev. HUBERT DELAVAL, M.A., F.Z.S., M.B.O.U.; Benham Park, Newbury. (June, 1895). *
- ASTLEY, REGINALD B.; Acton Reynald, Shrewsbury. (July, 1902).
- ATHERLEY, Mrs.; Attingham Park, Shrewsbury. (April, 1903).
- ATTEWELL, HAROLD E.; Merriebank, Kingston, Jamaica. (July, 1903).
- 20 BAKER, JOHN C., M.B., B.A., M.B.O.U.; Ceeley House, Aylesbury. (June, 1903).
- BALDELLI, La Contessa TOMMASI; 4, Via Silvio Pellico, Florence, Italy. (April, 1902).
- BAMFORD, Miss E.; The Leys, Kimbolton Road, Bedford. (June, 1895).
- BARBER, Mrs.; Milestone Cottage, Wickford, Essex. (Jan., 1899).
- BARBER, J. G.; Waverley House, Melton Road, Leicester. (Dec., 1902).
- BARCLAYWATSON, Miss F.; The Court House, Goring, Sussex. (July, 1902).
- BARNS, Miss, F.Z.S.; 52, Fitzroy Road, Regent's Park, N.W. (April, 1903).
- BATESON, The Hon. LILLA DE YARBURGH; Heslington, York. (Feb., 1900).
- BATHE, FRANK; 5, Montgomery Road, Sliarrow, Sheffield. (April, 1903).
- BATHGATE, JOHN; c/o Messrs. Shragger Brothers, 28, Dalhousie Square, W., Calcutta, India. (Oct., 1903).
- 30 BAXTER, Mrs.; Ivy House, Abbey Street, Burton-on-Trent. (Nov., 1897).
- BAYLDON, Mrs.; Oaklands, Dawlish. (Nov., 1902).
- BEAZLEY, ARTHUR; Wyndcroft, Enfield. (June, 1902).
- BEDFORD, The Duchess of, F.Z.S.; Woburn Abbey, Beds.; and 15, Belgrave Square, S.W. (Feb., 1903).
- BEEBE, C. WILLIAM; Curator of Ornithology, New York Zoological Park, New York City. (July, 1903).
- BENTLEY, DAVID; 80, St. Hubert's Street, Great Harwood, Blackburn. (July, 1895).
- BERKELEY, The Rev. C. J. ROWLAND; Belton Vicarage, Uppingham. (Nov., 1902).
- BINNY, Miss; 10, Queen's Gate Place, S.W. (April, 1903).
- BLAAUW, F. E., C.M.Z.S., M.B.O.U.; Gooilust, 'sGraveland, Hilversum, Holland. (Nov., 1901).
- BLACK, STANLEY O.; Minden, Hereford Road, Southsea. (April, 1899).
- 40 BLATHWAYT, A. P.; Frogmore, Watford, Herts. (Jan., 1895).
- BLATHWAYT, The Rev. FRANCIS LINLEY, M.A., M.B.O.U., 5, Monks Leys Terrace, Lincoln. (Jan., 1902).
- BONHOTE, JOHN LEWIS, M.A., F.Z.S., M.B.O.U.; Ditton Hall, Fen Ditton, Cambridge. (Dec., 1894).
- BOOTHROYD, ALFRED E.; 27, Duke Street, Southport. (Sept., 1901).

- BOUGHTON-LEIGH, HENRY; Brownsover Hall, Rugby. (May, 1900).
- BOUSKILL, GEO. E.; Romanhurst, Bramall Lane, Stockport. (April, 1896).
- BOWES, JOHN, J.P., F.Z.S., 7, Marine Terrace, Herne Bay. (Oct., 1900).
- BOWIE, Miss HELEN; Queen's Parade, Clifton Hill, Melbourne, Victoria. (Nov., 1903).
- BOYD, HAROLD; Barton House, Didsbury, Manchester. (March, 1902).
- BRADSHAW-ISHERWOOD, Mrs.; Grosvenor House, 1, Grosvenor Villas, Ramsgate. (June, 1902).
- 50 BRAMPTON, Miss E.; The Moat House, Brentwood, Essex. (Feb., 1898).
- BRELSFORD, JOHN; 75, Wellington Road North, Stockport. Oct., 1902).
- BROMET, Mrs. HENRY; Highfield, Tadcaster. (Oct., 1903).
- BROOKES, EDWARD J.; Inglesham, Sutton Coldfield. (Feb., 1899).
- BROOKSBANK, Mrs. ARTHUR; Gate Helmsley House, York. (May, 1898).
- BRYANT, Mrs.; Harold Wood Hall, Romford, Essex. (April, 1903).
- BULL, HENRY J.; 166, Upper Kennington Lane, Vauxhall, S.E. (Feb., 1903).
- BURGE, SAMUEL; Ivy Cottage, Fairford. (Nov., 1896).
- BURGESS, H. W.; High Street, Bushey, Herts. (Nov., 1900).
- BURTON, WALTER; Mooresfort, East Sheen, Mortlake, S.W. (Dec., 1901).
- 60 BUTLER, ARTHUR G., Ph.D., F.L.S., F.Z.S.; 124, Beckenham Road, Beckenham, Kent. (Orig. Mem.). *
- CALVERLEY-RUDSTON, Miss; Allertorpe Hall, Pocklington, York. (July, 1903).
- CAMPS, H. T. T., F.Z.S.; Linden House, Haddenham, Isle of Ely. (Orig. Mem.). *
- CAPERN, F.; 53, Redland Road, Bristol. (March, 1903).
- CARLYON, Mrs.; Brockenhurst, Hants. (Dec., 1900).
- CARNEGIE, The Lady; Crimonmogate, Lomnay, Aberdeenshire. (Feb., 1901).
- CARPENTER, The Hon. Mrs.; Kiplin, Northallerton. (Feb., 1898).
- CARPMAN, Miss; The Ivies, St. Julian's Farm Road, West Norwood. (April, 1896).
- CARRICK, GEORGE; "Stratford," Argyle Road, Saltcoats, N.B. (March, 1898).
- CARTER, WALTER L.; Summergate, Parkinson Lane, Halifax. (June, 1895). *
- 70 CASTELLAN, VICTOR E.; Hare Hall, Romford, Essex. (Orig. Mem.).
- CASTLE SLOANE, C., F.Z.S.; Oat Hall, near Crawley, Sussex. (March, 1900).
- CATLEUGH, W. T.; Clyffe, Richmond Wood Road, Bournemouth. (Dec., 1894).
- CECIL, The Lady WILLIAM; Hummanby Hall, Filey, Yorkshire. (Feb., 1901).
- CHAPMAN, P. GODFREY; 21, Lennox Gardens, S.W. (Oct., 1898).

- CHARRINGTON, Mrs. MOWBRAY; The Warren, Hever, Edenbridge, Kent. (May, 1896).
- CHASE, G. S.; 18, Hungerford Avenue, Crewe. (Jan., 1903).
- CHATWIN, HERBERT F.; 23, King Street, Nottingham. (Jan., 1902).
- CHAWNER, Miss; Forest Bank, Lyndhurst, Hants. (July, 1899).
- CHIOZZA, L. G.; Casa Cara, Beechwood Avenue, Oatlands, Weybridge. (Oct., 1902).
- 80 CHOLMLEY, Miss; Place Newton, Rillington, York. (Feb., 1903).
- CLAYTON, C. H.; 43, Albion Street, Wakefield. (Aug., 1901).
- CLITHEROW, Mrs. CLAUD TRACEY; 20, Park Square, Regent's Park, N.W. (June, 1903).
- COCKBURN, CHARLES; Sutton Rock, Chesterfield. (Oct., 1903).
- COLTON, R.; 39, Kearsley Road, Sheffield. (July, 1901).
- CONNELL, Mrs. KNATCHBULL; The Orchard, Brockenhurst, Hants. (Nov., 1897).
- CONSTABLE, The Rev. W. J.; Uppingham School, Uppingham. (Sept., 1901).
- CONYNGHAM, The Dowager Marchioness; 36, Belgrave Square, S.W. (Jan., 1900).
- COOPER, JAMES; Killerby Hall, Scarborough. (Orig. Mem.).
- COTTERELL, The Lady EVELYN; Garnons, Hereford. (Oct., 1902).
- 90 COXWELL-ROGERS, Miss; Park Gate, Cheltenham. (Dec., 1895).
- CRESSWELL, O. ERNEST, M.A., J.P.; Morney Cross, near Hereford. (Orig. Mem.).
- CRESWELL, WILLIAM GEORGE, M.D., F.Z.S.; Eden Lodge, Kingston-on-Thames. (June, 1900).
- CRONKSHAW, J.; Mansion House, Plantation Street, Accrington. (Dec., 1894).
- CUMMINGS, A.; 16, Promenade Villas, Cheltenham. (Dec., 1896).
- CUNLIFFE, Mrs.; 20, Eaton Gardens, Hove, Brighton. (May, 1899).
- CUSHNY, CHARLES; Pain's Hill, Cobham, Surrey. (June, 1896).
- CUTHBERTSON, E. H., Junr.; Bushey House, Bushey, Herts. (June, 1902).
- DART, HENRY; 53, Richmond Road, Kingston-on-Thames. (May, 1903).
- DAWNAY, The Lady ADELAIDE; Brampton House, Northampton. (July, 1903).
- 100 DELL, CHARLES; 9, High Street, Harlesden, N.W. (July, 1900).
- DE MANCHA, JOSÉ M.; 1, Gledhow Gardens, Earl's Court, S.W. (Oct., 1902).
- DENT, C. H.; Queen's Hotel, Penzance. (Feb., 1899).
- DE TABLEY, The Lady; Berry Court, Bournemouth. (June, 1902).
- DE TAINTEGNIES, La Baronne LE CLÉMENT; Cleveland, Minehead, Somerset. (Feb., 1902).
- DEVAS, GEORGE; Hartfield, Hayes, Kent. (Oct., 1898).
- DEWAR, J. F.; 2, St. Patrick Square, Edinburgh. (Orig. Mem.).
- DE WINTON, WILLIAM EDWARD, F.Z.S., M.B.O.U.; Zoological Society's Gardens, Regent's Park, London, N.W. (Aug., 1903).

- DOUGLAS, WILLIAM C., F.Z.S.; 9, Trebovir Road, Earl's Court, S.W. (Nov., 1900).
- DREWITT, FREDERIC DAWTREY, M.A., M.D., F.R.C.P., F.Z.S., M.B.O.U.; 14, Palace Gardens Terrace, Kensington, W. (May, 1903).
- 110 DRUITT, CLAUD F.; 2, Brighton Villas, London Road, Alvaston, Derby. (Jan., 1899).
- DUNLEATH, The Lady; Ballywalter Park, Ballywalter, co. Down, Ireland. (Aug., 1897).
- DUNSANY, The Lady; Dunstall Priory, Shoreham-by-Sevenoaks, Kent. (Feb., 1902).
- DUTTON, The Hon. and Rev. Canon; Bibury, Fairford. (Orig. Mem.).
- EDWARDS, G.; 151, Camberwell Road, S.E. (Aug., 1902).
- ELLIS, STEPHEN H.; 34, York Street, Wakefield. (June, 1902).
- ELWELL, JAMES E.; Park Cottage, York Road, Beverley. (May, 1901).
- EMPSON, Miss; 1, Mill Hill Road, Barnes Common, S.W. (Jan., 1903).
- EZRA, DAVID; 59, Ezra Street, Calcutta. (June, 1902).
- FARMBOROUGH, PERCY W., F.Z.S.; Lower Edmouton. (June, 1896). *
- 120 FARRAR, The Rev. C. D.; Micklefield Vicarage, Leeds. (Jan., 1895).
- FASEY, WILLIAM R.; The Oaks, Holly Bush Hill, Snaresbrook, N.E. (May, 1902).
- FELDDING, The Lady LOUISA; Broome Park, Betchworth, Surrey. (July, 1902).
- FFOULKES, Mrs.; St. Melangell, Brighton Road, Rhyl. (Aug., 1903).
- FIELD, GEORGE; Sorrento, Staplehurst, Kent. (March, 1900).
- FINN, FRANK, B.A., F.Z.S., M.B.O.U.; 29, Chalcot Crescent, Primrose Hill, London, N.W. (March, 1895).
- FINN, HARRY R.; 62, Alma Road, St. Albans, Herts. (July, 1903).
- FITZ-GERALD, Miss DOROTHY; c/o Colonel Fitz-Gerald, 68th Durham Light Infantry, Harrow-on-the-Hill, Ootacamund (*also* Wellington), Madras Presidency, India. (Feb., 1903).
- FLETCHER, The Rev. J. C. B., M.A.; Mundham Vicarage, Chichester. (April, 1902).
- FLOWER, Capt. STANLEY S., F.Z.S., M.B.O.U., Director, Egyptian Government Zoological Gardens; Ghizeli (Giza), Cairo. (Jan., 1903).
- 130 FOLLETT, The Lady JULIA; Woodside, Old Windsor. (Oct., 1903).
- FOSTER, WM. HILL; 164, Portland Street, Southport. (Jan., 1902).
- FOTHERGILL, Major HENRY, J.P.; Copt Hall, Hawkhurst. (April, 1900).
- FOWLER, CHARLES; 26, Broad Street, Blaenavon. (Dec., 1894).
- FOX, C. J.; 35, Addington Street, Ramsgate. (May, 1897).
- FROSTICK, JOHN; 18, Temperley Road, Balham, S.W. (Orig. Mem.). *
- FURNEAUX, Miss; 35, Banbury Road, Oxford. (Aug., 1903).
- GIBBINS, WILLIAM B.; Ettington, Stratford-on-Avon. (June, 1895). *
- GILBEY, Mrs.; 28, Seymour Street, Portman Square, W. (July, 1902).

- GILES, HENRY M., M.A.O.U. (Orig. Mem.); Zoological Gardens, Perth, Western Australia. (June, 1903).
- 140 GILL, ARTHUR; Veterinary Establishment, Bexley Heath, Kent. (Dec., 1899).
- GODDARD, Miss; Westrop House, Highworth, Swindon, Wilts. (Jan., 1902).
- GODDARD, H. E.; Rothesay, Thicket Road, Sutton, Surrey. (Feb., 1899).
- GOODCHILD, HERBERT, M.B.O.U.; 34, Fitzroy Road, Regent's Park, N.W. (Oct., 1902).
- GOODFELLOW, WALTER, F.Z.S., M.B.O.U.; Wyndale, Richmond Park, Bournemouth. (June, 1897).
- GORTER, Mrs.; The Delta, Walmer, Kent. (Nov., 1901).
- GRACE, GUSTAVE, 24, Wood Street, Wakefield. (March, 1896).
- GRASETT, EDWARD DOUGLAS; 20, Winton Terrace, Stoke-on-Trent. (Dec., 1901).
- GREENE, W. T., M.A., M.D.; 282, Portobello Road, North Kensington, W. (Dec., 1901).
- GREGORY, AUBREY; Gopalichuck, Jherial, E.I.R., India. (Nov., 1902).
- 150 GREGORY, Mrs.; Melville, Parkstone, Dorset. (Dec., 1901).
- GRIFFITHS, M. E.; Fernside, Childer Road, Stowmarket. (May, 1902).
- GRÖNVOLD, HENRIK; 26, Albert Bridge Road, Battersea Park, S.W. (Nov., 1902).
- GROSER, F. S.; 2, Belvedere Road, Alipore, Calcutta. (Sept., 1902).
- GUILFORD, Miss H.; 23, Lenton Avenue, The Park, Nottingham. (March, 1903).
- HALLIWELL, J.; 11, Westbourne Grove, West Kirby, Birkenhead. (Feb., 1903).
- HAMILTON, Madame; Les Deux Parzes, Champéry (Valais), Switzerland. (Nov., 1902).
- HAMILTON, Miss; 48, Bryanston Street, Portman Square, W. (April, 1902).
- HAMILTON, Mrs.; Bannerdown House, Bath-easton, Bath. (Feb., 1895).
- HAMMOND, The Hon. KATHERINE; 25, Eaton Place, S.W. (Aug., 1901).
- 160 HARBOTTLE, Miss M.; 12, Victoria Place, Budleigh Salterton, Devon. (Dec., 1895).
- HAREWOOD, The Countess of; Harewood House, Leeds. (March, 1903).
- HARPER, Miss; 52, Goldington Avenue, Bedford. (March, 1902).
- HARPER, EDMUND WILLIAM, F.Z.S., M.B.O.U.; 52, Goldington Avenue, Bedford. (Feb., 1901).
- HARPER, FREDERICK WM.; East Cottingwood, Morpeth. (May, 1902).
- HARRIS, FRANK, F.R.H.S.; Vernon Park, Stockport. (Oct., 1902).
- HARTLEY, Mrs.; St. Helen's Lodge, Hastings. (April, 1897).
- HAWKE, The Hon. MARY C.; Wighill Park, Tadcaster. (Nov., 1900).
- HAWKINS, L. W.; Estrilda, 17, New Clive Road, West Dulwich, S.E. (Jan., 1899).
- HEATH, FRANCIS GEORGE; Underwood, Kew Gardens, Surrey. (Sept., 1902).

- 170 HEMSWORTH, The Rev. B., M.A., J.P.; Monk Fryston Hall, South Milford, Yorks. (June, 1901).
- HESELTON, H. C.; 274, Westminster Road, Liverpool. (Dec., 1899).
- HEWSON, GEORGE, A.M., I.C.E.; Glendoone, Harehills Avenue, Leeds. (Nov., 1902).
- HILL, Mrs. REGINALD; Holfield Grange, Coggeshall, Essex. (Aug., 1903).
- HILL, W. T.; 337, Great Cheetham Street, Manchester. (Dec., 1900).
- HINCKES, R. T.; Foxley, Hereford. (Feb., 1899).
- HINDLE, FRÉDÉRIC G.; Thorncliffe, Darwen. (May, 1902).
- HINDLE, R. FRANKLIN; 44, Grosvenor Road, Birkdale, Southport. (Sept., 1898).
- HODGSON, The Hon. Mrs.; Escrick Rectory, York. (March, 1903).
- HODGSON, RICHARD, Junr.; Molescroft, Beverley. (Feb., 1903).
- 180 HOLDING, Mrs.; 14, Vanbrugh Park, Blackheath. (Feb., 1903).
- HOPSON, FRED. C.; Northbrook Street, Newbury. (March, 1897).
- HORSBRUGH, Capt. BOYD R., A.S.C.; Seabrook Vale, Shorncliffe Camp, Kent. (Jan., 1898).
- HORTON, LEONARD W.; Longfield, Bescot, Walsall. (Feb. 1902).
- HOUGH, HAROLD; 96, Wellington Road South, Stockport. (Oct., 1902).
- HOULTON, CHARLES; Laburnum House, Denton's Green, St. Helen's, Lanc. (Feb., 1897).
- HOUSDEN, JAMES B.; Brooklyn, Cator Road, Sydenham. (Orig. Mem.).
- HOWARD, ROBERT JAMES, M.B.O.U.; Shear Bank, Blackburn. (April, 1903).
- HOWMAN, Miss; Sherwood, Essex Grove, Upper Norwood. (March, 1897).
- HUGHES, Mrs.; Fairhaven, Preston Drove, Brighton. (April, 1895).
- 190 HUMPHRYS, RUSSELL; Southboro', Bickley, Kent. (April, 1896).
- HUSBAND, Miss; Clifton View, York. (Feb., 1896).
- HUTT, HENRY T.; 24, Cockspur Street, London, S.W. (Nov., 1896).
- INCHQUIN, The Lady; Moor Park, Ludlow. (Nov., 1897).
- INGLIS, CHAS. M.; Baghownie Factory, Hatauri Post Office, viâ Hya Ghât, Tirhoot State Railway, India. (Sept., 1902).
- INNES BEY, Dr. FRANCES WALTER, M.B.O.U.; Curator, Zoological Museum, Government School of Medicine, Cairo, Egypt. (Mar., 1903).
- IVENS, Miss; "Wroxham," 12, Church Road North, Hanwell, Middlesex. (Aug., 1903).
- JARDINE, Miss EMILY; Lady Superintendent, Freed Slaves' Home, Northern Nigeria, West Africa. (Jan., 1903).
- JENNISON, GEORGE; Davonport Park, Stockport. (Sept., 1897).
- JOHNSTONE, Mrs. E. J.; Rougham Hall, Bury St. Edmunds. (May, 1900).
- 200 JONES, H.; 13, Commercial Road, Ipswich. (Oct., 1903).

- KEENE, Mrs.; Sandlea, Abbotsham Road, Bideford, N. Devon. (Feb., 1897).
- KEMP, ROBIN; The Chase, Halstead, Essex. (March, 1903).
- KESTERMANN, HERMANN; 41, Rue de Clichy, Paris, France. (March, 1903).
- KEYTEL, P. CASPER; Brighton Castle, Mouille Point, Cape Town, South Africa. (June, 1902).
- KIRKWOOD, Mrs.; Highfields Park, Withyham, Tunbridge Wells. (June, 1903).
- LAMBERT, FRANK F.; Langholm, Beverley. (June, 1900).
- LANCASTER, Mrs. H. R.; 7, Victoria Terrace, Walsall. (Aug., 1897).
- LANDLESS, W.; Portland Villa, Waterloo Road, Ashton-on-Ribble, Preston. (Dec., 1896).
- LANGFORD, Miss; Fairlea, Upperton Road, Eastbourne. (Nov., 1902).
- 210 LASCELLES, The Hon. GERALD, F.Z.S., M.B.O.U.; The King's House, Lyndhurst. (Oct., 1896).
- LATTEY, Miss; Hollydene, Allensbank Road, Cardiff. (Jan., 1902).
- LAWSON, Mrs. F. W.; Adel, Leeds. (Nov., 1903).
- LEEDER, J. VINER; Dorset House, Bryn Road, Swansea. (Nov., 1899).
- LENNIE, J. C.; Rosepark, Trinity Road, Edinburgh. (Orig. Mem.). *
- LEVERKÜHN, Dr. PAUL, M.D., C.M.Z.S., &c.; Director of the Scientific Institutions and Library of H.R.H. The Prince of Bulgaria; The Palace, Sophia, Bulgaria. (May, 1903).
- LEWIS, The Rev. T. C.; Dodbrooke Rectory, Kingsbridge, South Devon. (Jan., 1902).
- LILFORD, The Lady; Lilford Hall, Oundle, Northamptonshire. (Jan., 1898).
- LITTLE, ERNEST W.; 16, Great Quebec Street, Montagu Square, W. (Nov., 1901).
- LITTLE, GEO. W., M.D.; 47, Ridge Street, Glens Falls, N.Y., United States of America. (Oct., 1903).
- 220 LEWELYN, Sir JOHN T. DILLWYN, Bart., M.A., D.L., F.Z.S.; Penllergaer, Swansea. (May, 1903).
- LOVELL, Miss HELEN; Hinchleslea, Brockenhurst, Hants. (June, 1903).
- LOWE, SAMUEL; 14, Banks Lane, Stockport. (Oct., 1902).
- LYON, Miss R.; Harwood, Horsham. (Nov., 1894).
- MCLAUGHLIN, Lient.-Col. H. I., R.A.M.C.; The Neuk, Bridge of Teith, Doune, Perthshire. (Aug., 1902).
- MAYFLAND, Mrs. KEITH; 2, Douglas Gardens, Edinburgh. (July, 1900).
- MARTIN, H. C.; 141, Victoria Road, Old Charlton, Kent. (Jan., 1897).
- MASON, BAZLINTON; 23, North Parade, Lincoln. (Nov., 1902).
- MATHIAS, H. W., F.R.H.S.; Doone Cottage, Thames Ditton, Surrey. (March, 1900).
- MAXWELL, C. T.; South Lawn, 24, Acre Lane, Brixton, S.W. (March, 1896).
- 230 MAYOR, CECIL M.; Holmwood, Paignton, S. Devon. (March, 1903).
- MEADE-WALDO, E. G. B., F.Z.S., M. B. O. U.; Stonewall Park, Edenbridge, Kent. (Jan., 1895).

- MICHELL, Mrs.; Crakehall, Bedale. (Sept., 1898).
MILLER, Lady; The Knole, Bournemouth. (July, 1899).
MOERSCHELL, F.; Imperial Hotel, Malvern. (June, 1895).
MOORE, WM. FAWCETT; 18, Albany Street, Edinburgh. (Aug., 1903).
MORSE, D. S.; Bank of Ireland, Mount Bellew, Ireland. (July, 1903).
MORSHEAD, Lady; Forest Lodge, Binfield, Bracknell, Berks. (Dec., 1894). *
MORTIMER, Mrs.; Wigmore, Holmwood, Surrey. (Orig. Mem.). *
MORTIMER, Miss; Wigmore, Holmwood, Surrey. (March, 1903).
240 MUMFORD, J. J.; The Poplars, Kettering. (Dec., 1900).
MURRAY, JOHN; 25, Glasgow Street, Ardrossan. (March, 1903).
MYLAN, JAS. GEORGE, M.D.; Carlisle House, Grimsthorpe, Sheffield. (Dec., 1901).
NEEDHAM, The Hon. Mrs.; Berry Hill, Taplow, Maidenhead. (June, 1903).
NEWMAN, T. H., F.Z.S.; 20, Montpelier Square, South Kensington, S.W. (May, 1900).
NICHOLSON, ALFRED E.; Enliuville, Coltbridge Gardens, Edinburgh. (Oct., 1896). *
NOBLE, Mrs.; Park Place, Henley-on-Thames. [Oct., 1900].
NORMAN, Miss; Royal Hospital, Chelsea, S.W. (Jan., 1902).
NORTH, Mrs. FREDERICK; 8, Bryanston Street, Portman Square, W. (Aug., 1903).
NORWOOD, EILE; York. (Aug., 1901).
250 OAKEY, W.; 71, Grove Road, Leicester. (March, 1896). *
OATES, F. W.; White House Farm, New Leeds, Leeds. (Oct., 1897).
OBERHOLSER, HARRY C., Biological Survey, Department of Agriculture; 1454, Sheridan Avenue, N. W., Washington, D. C., United States of America. (Oct., 1903).
OCHS, JAMES F., F.Z.S.; St. Ann's Hill, Chertsey, Surrey. (Oct., 1903).
OGILVY, HENRY S. T. HAMILTON; Biel, Prestonkirk, N.B. (March, 1900).
OGLE, BERTRAM SAVILE, M.B.O.U.; Steeple Aston, Oxford. (Dec., 1902).
O'REILLY, NICHOLAS S.; 9, Royal Crescent, Raunsgate. (Dec., 1894).
OSBALDESTON, W.; 3, Tithe Barn Street, Preston. (June, 1895). *
OSTREHAN, J. ELIOTT D.; Bank House, Thame, Oxon. (April, 1903).
PAGE, WESLEY T., F.Z.S.; 6, Rylett Crescent, Shepherd's Bush, W. (May, 1897).
260 PANTON, Miss ALICE; 14, King Edward's Road, Oldfield Park, Bath. (April, 1903).
PARKER, DUNCAN, J.P.; Clopton Hall, Woolpit, Bury St. Edmunds. (June, 1903).
PARKIN, THOMAS, M.A., F.R.G.S., F.Z.S., M.B.O.U.; Fairseat, High Wickham, Hastings. (Oct., 1903).
PARSONS, Miss; Birdsall Grange, York. (Jan., 1902).

List of Members.

- PEELE, R. de C. ; The Church House, Ashford, Ludlow. (July, 1902).
- PEIR, P. ; Box 504, G.P.O., Sydney; and 50, Bondi Road, Waverley, Sydney, N.S. Wales. (July, 1903).
- PERCIVAL, WALTER GILBEY ; c/o G. Neville, Esq., Government House, Berber, Sudan, via Egypt. (Feb., 1902).
- PERRIER, Mrs. LUMLEY ; Saville House, Twickenham. (Feb., 1899).
- PERRING, C. S. R. ; 4, Cambridge Road, High Street, Teddington. (Sept., 1895).
- PERRYMAN, C. W. ; Bifrons, Farnborough, Hants. (March, 1902).
- 270 PHILLIPPS, NOEL ; 21, Addison Gardens, Kensington, W. (Nov., 1901).
- PHILLIPPS, REGINALD ; 26, Cromwell Grove, West Kensington Park, W. (Orig. Mem.). *
- PHILLIPPS, Mrs. ; 26, Cromwell Grove, West Kensington Park, W. (Orig. Mem.).
- PHILPOT, WM. R. ; 8, Cheselden Road, Guildford. (July, 1902).
- PICARD, HUGH K. ; 10, Sandwell Crescent, W. Hampstead, N.W. (March, 1902).
- PICKFORD, RANDOLPH JOHN ; Job's Hill House, Crook, co. Durham. (Feb., 1903).
- PITT, Mrs. ; The Nest, Torquay. (Dec., 1894).
- PLOMLEY, J. F., M.D. ; Kuightrider House, Maidstone. (Feb. 1898).
- PORTER, G. C. ; 38, Mill Street, Bedford. (Dec., 1901).
- POWIS, The Earl of ; 45, Berkeley Square, W. ; and Powis Castle, Welshpool. (April, 1902).
- 280 PRICE, ATHELSTAN E., M.B.O.U. ; Bridge Cottage, Broxbourne, Herts. (August, 1902).
- PRIDHAM, Mrs. ; Windsor Villa, Mannamead, Plymouth. (May, 1902).
- PROCTOR, Major F. W. ; Downfield, Maidenhead. (May, 1903).
- RABBICH, H. P. ; The Kraal, Paignton, S. Devon. (March, 1903).
- RATHBORNE, HENRY B. ; Dunsinea, Castleknock, co. Dublin. (May, 1901).
- RATHBORNE, Mrs. ; Dunsinea, Castleknock, co. Dublin. (Nov., 1902).
- RAWSON, Miss ; Millhouse, Halifax. (Nov., 1903).
- REAY, J. H. A. ; 7, Rosemount, Wallington, Surrey. (April, 1898).
- REID, Mrs. ; Funchal, Madeira. (Feb., 1895).
- REID, C. S. ; 4, Howard Park Drive, Kilmarnock. (Dec., 1902).
- 290 RENAULT, W. E., M.B.O.U. ; 15, Grafton Square, Clapham, S.W. (April, 1897).
- RENSHAW, GRAHAM, M. B. : Sale Bridge House, Sale, Manchester. Feb., 1903).
- RICE, Captain G. ; Clayquhat, Blairgowrie, N.B. (May, 1902).
- RICHARD, E. : Hotel Metropole, Brighton. (Orig. Mem.).
- RITCHIE, NORMAN ; The Holmes, St. Boswell's, N.B. (Feb., 1903).
- ROBERTS, Mrs. ; Beaumaris, Montpelier Street, Hobart, Tasmania. (June, 1903).
- ROBERTS, NORMAN B. ; West Retford Cottage, Retford. (Feb., 1898).
- ROBERTSON, Mrs. ; Bishop's Tachbrook, Leamington. (Jan., 1900).

- ROE, Miss M.; Edgmond, Cambridge Road, Bellevue, Hobart, Tasmania. (June, 1903).
- ROGERSON, A.; Fleurville, Ashford Road, Cheltenham. (Dec., 1902).
- 300 ROSWELL, IRVINE P.; 240A, School Street, Winter Hill, Somerville, Mass., *and* (for letters only) 6 and 8, Brattle Square, Boston, Mass., United States of America. (Oct., 1903).
- ROTCH, Mrs.; 3, Beach Lawn, Waterloo, Liverpool. (June, 1897).
- ROTHERA, CHAS. L., B.A.; Hazelwood, Forest Grove, Nottingham. (July, 1895).
- ROTHSCHILD, The Hon. L. WALTER, M.P., D.Sc., F.Z.S., M.B.O.U.; Tring Park, Herts. (Jan., 1900).
- RUDKIN, F. H.; Belton, Uppingham. (Oct., 1902).
- RYCROFT, MARK E.; 8, Park Street, Wakefield. (Jan., 1902).
- ST. QUINTIN, WILLIAM HERBERT, F.Z.S., M.B.O.U.; Scampston Hall, Rillington, York. (Orig. Mem.).
- ST. QUINTIN, Miss; Scampston Hall, Rillington, York. (Jan., 1902).
- SALT, Dr. E. G.; 59, George Square, Edinburgh. (July, 1895).
- SALTER, ALBERT J.; Thame, Oxon. (March, 1902).
- 310 SAN GERMANO è CALABRITTO, La Duchessa di; 10, Emperor's Gate, S.W. (Oct. 1902).
- SAUNDERS, WM. RADCLIFFE, C.E., F.Z.S., M.B.O.U.; 33, Princes Square, Bayswater, W. (May, 1903).
- SAVAGE, A.; 3, Rue Bihorel, Bihorel, Rouen, Seine Inférieure, France. (April, 1895).
- SAVEGE, GEORGE, M.D.; Newbegin, Beverley. (Oct., 1896).
- SCHERREN, HENRY, F.Z.S., M.B.O.U.; 9, Cavendish Road, Harringay, N. (Dec., 1902).
- SCHMETTAU, GEORGE E.; Redlands, Crockham Hill, Edenbridge, Kent. (June, 1903).
- SCHWEDER, PAUL E.; Courtlands, Goring—Worthing, Sussex. (Nov., 1902).
- SCOTT, Professor WILLIAM E. D., Curator of Ornithology; Princeton Museum, Princeton, N. J., United States of America. (June, 1900).
- SERGEANT, JOHN; 10, London Street, Southport. (Orig. Mem.). *
- SETH-SMITH, DAVID, F.Z.S., M.B.O.U.; Glengarry, 14, Canning Road, Addiscombe, Surrey. (Dec., 1894).
- 320 SETH-SMITH, LESLIE M., B.A.; Alleyne, Caterham Valley, Surrey. (July, 1902).
- SHARP, Miss; Spring Gardens, Ringwood, Hants. (Orig. Mem.).
- SHELLEY, Capt. GEORGE ERNEST, F.Z.S., F.R.G.S., M.B.O.U.; 39, Egerton Gardens, South Kensington, S.W. (Aug., 1903).
- SHEPHERD, Miss B.; The Den, Walton-on-Thames. (April, 1901).
- SHERBRÖOKE, Mrs. P.; Keldholme Priory, Kirby Moorside, Yorks. (March, 1897).
- SHERSTON, Mrs. MAXWELL; Alford Cottage, near Castle Cary, Somerset. (May, 1902).
- SHOWELL, Miss; Park Vale, Edgbaston, Birmingham. (April, 1903).
- SICH, HERBERT LEONARD; c/o H. C. Holman, Esq., Lydfords, East Hoathly, Sussex. (Feb., 1902).

- SIMPSON, ARCHIBALD; 98, Tempest Road, Beeston Hill, Leeds. (Feb., 1901).
- SLATER, ARTHUR A.: Prescott Road, St. Helen's. (Nov., 1894).
- 330 SMART, JOHN; 12, Royal Crescent, Edinburgh. (Nov., 1894).
- SMITH, H. B.; Grangefield, Park Road South, Birkenhead. (June, 1895). *
- SMITHWICK, Capt. W. F.; Youghal House, Nenagh, Ireland. (Nov., 1902).
- SPEED, HEDLEY; 12, Victoria Park, Bangor, Wales. (Nov., 1900).
- SPICER, The Lady MARGARET; Spye Park, Chippenham, Wilts. (March, 1903).
- STANSFELD, JOHN; Dnuninald, Montrose, N. B. (Dec., 1896).
- STANFORTH, Mrs.; Kirk Hammetton Hall, York. (Nov., 1897).
- STARK, W. P.; Hillstead, Basingstoke, Hants. (Aug., 1903).
- STEINBERG, M.; 578, West Street, Durban, Natal. (Sept., 1903).
- STEVENS, W. E.; Punch Bowl Hotel, Lowther Street, York. (June, 1899).
- 340 STRICK, CHARLES; The Croft, West Cross, Glamorganshire. (June, 1903).
- STURTON-JOHNSON, Miss; Orotava House, Ore, Hastings. (May, 1897).
- SUTTON, LADY; Benham Park, Newbury. (Dec., 1901).
- SWAILES, GEORGE C.; Beverley, Yorks. (June, 1895).
- SWAN, J. A.; 87, Lower Kennington Lane, S.E. (June, 1902).
- SWAYSLAND, WALTER; 47, Queen's Road, Brighton. (Orig. Mem.). *
- SWIFT, DONALD, 58, Avenue Road, Crouch End, N. (Dec., 1898).
- SWINFEN-BROWN, Mrs.; Swinfen Hall, Lichfield. (Feb., 1898).
- TATE, Miss; Allerburn, Alnwick. (May, 1900).
- TATE, ALAN; 182, South Street, Park, Sheffield. (June, 1897).
- 350 TAYLOR, J. B.; Sierfield Manor, Basingstoke, Hants. (Aug., 1902).
- TERRY, Major HORACE A., M.B.O.U. (late Oxfordshire Light Infantry); The Lodge, Upper Halliford, Shepperton. (Oct., 1902).
- THOM, A. A.; Adlington (Lancs.), Chorley. (June, 1895). *
- THOMAS, HENRY; The Vineries, Boroughbridge, York. (Jan., 1895).
- THOMAS, Miss F.; The Manor House, Hurworth, Darlington. (March, 1899).
- THOMASSET, BERNARD C.; West Wickham, Kent. (July, 1896).
- THOMPSON, Lady; 1, Hyde Park Mansions, W. (May, 1900).
- THOMPSON, Mrs. WALDEGRAVE; Forest Lodge, 23, Ravenscourt Park, W. (Dec., 1895).
- THOMSON, ARTHUR; Assistant Superintendent, Zoological Society's Garden's, Regent's Park, N.W. (Nov., 1903).
- THORNILEY, PERCY WRIGHT; Shooter's Hill, Wem, Shrewsbury. (Feb., 1902).
- 360 THORPE, CHARLES; Selborne, Chatsworth Road, Croydon. (Dec., 1901).
- THORPE, F. C.; 67, West Street, Sheffield. (Jan., 1902).
- THURSBY, Lady; Ormerod House, Burnley. (June, 1895). *
- TIDEY, J. W.; 11, York Road, Worthing, (Nov., 1902).

- TODD, RICHARD ALFRED, F.Z.S.; Groombridge, Hersham, Walton-on-Thames. (June, 1895).
- TOMES, W., J. P.; Glenmoor, 31, Billing Road, Northampton. (Dec., 1902).
- TOWNEND, FRANK H.; 26, Dornton Road, South Croydon. (May, 1895). *
- TOWNSEND, STANLEY, M.; 3, Swift Street, Fulham, S.W. (Sept., 1898).
- TRESTRAIL, Major ALFRED B., F.R.G.S.; Southdale, Clevedon. (Sept., 1903).
- TREVOR-BATTYE, AUBYN B. R., M.A., F.L.S., &c.; Broxton, Chilbolton, Stockbridge, Hants. (July, 1898).
- 370 TURNER, THOMAS, J.P.; Cullompton, Devon. (Dec., 1895).
- TWEEDIE, Capt. W.; 93rd Highlanders; Stirling Castle, Stirling, N.B. (April, 1903).
- VALENTINE, ERNEST; 7, Highfield, Workington. (May, 1899).
- VAN UFFORD, IONKHEER L. I. QUARLES; 8, van de Spiegelstraat, The Hague (den Hagg), Holland, (Nov., 1902).
- VERE, The Very Rev. Canon; St. Patrick's Presbytery, 21A, Solho Square, London, W. (Sept., 1903).
- VERRALL, CLAUDE; Leyton Lodge, Denmark Road, Carshalton. (May, 1897).
- VIVIAN, Mrs.; 35, Rua Alegre, Foz do Douro, Portugal. (March, 1903).
- WADDELL, Miss PIEDDIE; 4, Great Stuart Street, Edinburgh. (Feb., 1903).
- WALKER, Mrs. HERBERT; 55, Fitzroy Road, Regent's Park, N.W. (June, 1903).
- WALKER, Miss; Hanley Lodge, Corstorphine, Midlothian. (Jan., 1903).
- 380 WALKER, Miss H. K. O.; Chesham, Bury, Lanc. (Feb., 1895).
- WALKER, R. W. S.; Glen Hall, Leicester. (Feb., 1903).
- WALL, T. A.; New Lyric Club, Coventry Street, W. (May, 1902).
- WALLOP, The Hon. FREDERIC; 48, Eaton Terrace, S.W. (Feb., 1902).
- WARDE, The Lady HARRIET; Knotley Hall, Tunbridge. (Aug., 1903).
- WATERHOUSE, Mrs. D.; 6, Esplanade, Scarborough. (Feb., 1903).
- WATKINS, WATKIN, B.A., F.Z.S., M.B.O.U.; Highfield, Harrow. (April, 1903).
- WATSON, JOHN; Wentbridge Lodge, Pontefract. (Sept., 1900).
- WEBBER, Mrs. OSWALD; Malborough House, Pinhoe, Exeter. (Aug., 1903).
- WENTWORTH, Mrs.; Woolley Park, Wakefield. (Nov., 1903).
- 390 WEST, Miss E. E.; The Homestead, Hawthorne Road, Bickley Park, Kent. (April, 1898). *
- WHEELER, I. MORDAUNT, M.D.; 435, Battersea Park Road, S.W. (Feb., 1903).
- WHITAKER, JOSEPH, I. S., F.Z.S., M.B.O.U.; Malfitano, Palermo, Sicily. (Aug., 1903).
- WHITEHEAD, Mrs. HENRY; Haslem Hey, Bury, Lanc. (March, 1902).
- WHYTEHEAD, T. B.; Aconib House, York. (April, 1897).

List of Members.

- WIENER, AUG. F., F.Z.S.; 6, Northwick Terrace, Maida Vale, N.W. (July, 1896).
- WIGLESWORTH, JOSEPH, M.D., M.B.O.U.; Rainhill, Lancashire. (Oct., 1903).
- WIGRAM, Miss FLORENCE E.; Chesnut Lodge, Cobham, Surrey. (July, 1903).
- WIGRAM, Miss MADELINE; King's Gatchell, Taunton. (Sept., 1903).
- WILDE, Miss M.; Little Gaddesden, Berkhamsted. (Dec. 1896).
- 400 WILLATT, Miss MABEL; The Lodge, Draycott, Derby. (April, 1903).
- WILLIAMS, Mrs. C. H.; 49, Okehampton Road, St. Thomas, Exeter. (May, 1902).
- WILLIAMS, Mrs. HOWARD; Hamilton Lodge, Bickley, Kent. (April 1902).
- WILLIAMS, Mrs. LESLIE; Swanswick Cottage, Bath. (June, 1895).
- WILLIAMSON, R. B.; Probate House, Wakefield. (May, 1902).
- WILMOT, The Rev. RICHARD H.; Poulton Vicarage, Fairford. (Dec., 1902).
- WILSON, T. NEEDHAM; Oak Lodge, Bitterne, Southampton. (Dec., 1901).
- WINCHILSEA and NOTTINGHAM, The Countess of; Harlech, Merioneth. (April, 1903).
- WOODS, Miss; North Grimstone House, York. (May, 1902).
- WORKMAN, WM. HUGHES, M.B.O.U.; Lismore, Windsor, Belfast. (May, 1903).
- 410 WRIGHT, Mrs.; 3, Rose Villas, Picton Road, Ramsgate. (Feb., 1898).
- WRIGHT, Mrs.; Hampsthwaite Hall, Ripley, Yorks. (Jan., 1903).
- WROTRESLEY, The Hon. WALTER B., F.Z.S.; 8, Herbert Crescent, Chelsea, S.W. (Oct., 1902.)
- YARBOROUGH, Mrs.; Campsmount, Doncaster. (Nov., 1899).
- YEWDALE, P.; Brookfield, Calverley, Leeds. (June, 1903).
- YOUNG, WILLIAM; Taw Vale, Barnstaple, Devon. (Nov., 1903).

Received late.

- DENT, Miss ISABEL A.; Ribston Hall, Weatherby. (Nov., 1903).
- EGERTON, Miss; Terrington House, York. (Nov., 1903).
- MARSHALL, Maj. Gen. Sir G. H., K.C.B.; Manor Lodge, Aldershot. (Nov., 1903.)

RULES OF THE AVICULTURAL SOCIETY.

As amended June, 1903.

1.—The name of the Society shall be THE AVICULTURAL SOCIETY, and its objects shall be the study of Foreign and British Birds in freedom and in captivity. Poultry, Pigeons, and Canaries shall be outside the scope of the Society. The year of the Society, with that of each volume of the Society's Magazine, which shall be known as *The Avicultural Magazine*, shall commence with the month of November and end on the 31st of October following.

2.—The Avicultural Society shall consist of Ordinary and Honorary Members; and the latter shall be restricted in number to six, and be elected by the Council.

3.—The Officers of the Society shall be elected, annually if necessary, by the Members or Council in manner hereinafter provided, and shall consist of a President, one or more Vice-Presidents, a Business Secretary, a Correspondence Secretary, an Editor, a Treasurer, an Auditor, a Scrutineer, and a Council of Twelve Members. The Secretaries, Editor, and Treasurer, shall be *ex-officio* Members of the Council, and the first three of the Executive Committee.

4.—New Members shall be proposed in writing; and the name and address of every person thus proposed, with the name of the Member proposing him, shall be published in the next issue of the Magazine. Unless the candidate shall, within two weeks after the publication of his name in the Magazine, be objected to by at least two Members, he shall be deemed to be duly elected. If five Members shall lodge with the Business Secretary objections to any candidate he shall not be elected, but the signatures to the signed objections must be verified by the Scrutineer. If two or more Members (but less than five) shall object to any candidate, the Secretary shall announce in the next number of the Magazine that such objections have been lodged (but shall not disclose the names of the objectors), and shall request the Members to vote upon the question of the election of such candidate. Members shall record their votes in sealed letters addressed to the Scrutineer, and a candidate shall not be elected unless two-thirds of the votes recorded be in his favour; nor shall a candidate be elected if five or more votes be recorded against his election.

5.—Each Member shall pay an annual subscription of 10/-, to be due and payable in advance on the 1st of November in each year. New

Members shall pay, in addition, an entrance fee of 10/6; and, on payment of their entrance fee and subscription, they shall be entitled to receive all the Numbers of the Society's Magazine for the current year.

6.—Members intending to resign their Membership at the end of the current year of the Society are expected to give notice to the Business Secretary before the 1st of October, so that their names may not be included in the "List of Members" which shall be published annually in the November Number of the Magazine.

7.—The Magazine of the Society shall be issued on or about the first day of every month*, and forwarded, post free, *to all the Members who shall have paid their subscription for the year; but no Magazine shall be sent or delivered to any Member until the annual subscription shall have reached the hands of the Business Secretary.* Members whose subscription shall not have been paid as above by the first day of September in any year shall cease to be Members of the Society, and shall not be re-admitted until a fresh entrance fee, as well as the annual subscription, shall have been paid.

8.—The Editor shall have an absolute discretion as to what matter shall be published in the Magazine (subject to the control of the Council). The Business Secretary and Editor shall respectively refer all matters of doubt or difficulty to the Council. The decision of the majority of the Council shall be final and conclusive in all matters.

9.—The Secretaries, Editor, and Treasurer shall be elected for a term of five years, and, should a vacancy occur, it may be filled up by the Executive Committee. At the expiration of the term of five years in every case, it shall be competent for the Council to re-elect the officer for a further term of five years, unless a second candidate be proposed by not less than twenty-five Members of at least two years' standing, as set forth below.

As regards the Council, an election may take place any October should the number of sitting Members and candidates exceed, if only by one, the number of vacancies. Should two years pass without an election, in the third there shall be a general election, as shown below. Should, however, the number of candidates not exceed twelve, voting papers would not be issued.

Candidates for any post must be proposed in writing by one Member, and seconded by one (or more, see above) other Member, before they shall be eligible for election; but this shall not apply to officers willing to stand for re-election to the same office. All such proposals which have been duly

* Owing to the extra pressure of work, the October and November numbers *must* be late.

seconded must reach the Business Secretary before the 10th of September. The Business Secretary shall prepare a voting paper containing a list of the candidates, showing the offices for which they are respectively seeking election or re-election, and shall send a copy of such voting paper to each Member of the Society with the October Number of the Magazine. Each Member shall make a cross (X) opposite the names of those for whom he desires to vote, and shall sign the voting paper at the foot, and send it to the Scrutineer, in a sealed envelope, so as to reach him by the 16th of October. The Scrutineer shall prepare a written return of the officers elected, showing the number of the votes recorded for each candidate, and send it to the Business Secretary before the 21st of October for publication in the November Number of the Magazine. In the event of an equality of votes, the President shall have a casting vote.

10.—It shall be lawful for the Council to delegate any of their powers to a Committee of not less than three, including the *ex-officio* Members.

11.—The Council (but not a Committee of the Council) shall have power to alter and add to the Rules, from time to time, in any manner they may think fit,—five to form a quorum at any meeting of the Council.

12.—The Council shall have power to expel any Member from the Society at any time without assigning any reason.

13.—Neither the office of Scrutineer nor that of Auditor shall be held for two consecutive years by the same person.

14.—The Scrutineer shall not reveal to any person how any Member shall have voted.

15.—If any office shall become vacant at any time other than at the end of the Society's year, the Council shall have power to nominate any Member of the Society to fill the vacancy until the expiration of the current year.

THE SOCIETY'S MEDAL.

The Medal may be awarded, at the discretion of the Committee, to any Member who shall succeed in breeding, in the United Kingdom, any species of bird which shall not be known to have been previously bred in captivity in Great Britain or Ireland. Any Member wishing to obtain the Medal must send a detailed account to the Business Secretary, for publication in the Magazine, within about eight weeks from the date of the hatching of the young, and furnish such evidence of the facts as the Executive Committee may require. The Medal will be awarded only in cases where the young shall live to be old enough to feed themselves, and to be wholly independent of their parents.

The account of the breeding must be reasonably full, so as to afford instruction to our Members, and should describe the plumage of the young, and *be of value as a permanent record of the nesting and general habits of the species.* These points will have great weight when the question of awarding the Medal is under consideration.

The parents of the young must be the *bonâ fide* property of the breeder. Any evasion of this rule, in any form whatever, will not only disqualify the breeder from any claim to a Medal in that particular instance, but will seriously prejudice any other claims he or she may subsequently advance for the breeding of the same or other species.

In every case, the decision of the Committee shall be final.

The Medal will be forwarded to each Member as soon after it shall have been awarded as circumstances will permit.

The Medal is struck in bronze, and measures $2\frac{1}{2}$ inches in diameter. It bears on the obverse a representation of two birds with a nest containing eggs, and the words "The Avicultural Society—Founded 1894." On the reverse is the following inscription: "Awarded to (*name of donee*) for rearing young of (*name of species*) a species not previously bred in captivity in the United Kingdom.

Members to whom Medals have been awarded.

- Vol. III., p. 210. Mr. R. A. TODD, for breeding the Long-tailed Grassfinch, *Poephila acuticauda*, in 1897.
- „ IV., pp. 45 & 77. Mr. GEORGE E. BOUSKILL, for breeding the Golden-crowned Parrakeet, *Cyanorhamphus auriceps*, in 1897.
- „ IV., p. 212. The Rev. C. D. FARRAR, for breeding the African Firefinch, *Lagonosticta minima*, in 1898.
- „ V., p. 1. Mr. F. G. B. MEADE-WALDO, for breeding the Chinese Quail, *Excalfactoria chinensis*, in 1898.

- Vol. V., p. 159. Mr. E. G. B. MEADE-WALDO, for breeding the Scops Owl, *Scops giu*, in 1899.
- „ „ p. 165. The Rev. C. D. FARRAR, for breeding the Noupareil, *Cyanospiza ciris*, in 1899.
- „ „ p. 169. Mr. R. PHILLIPPS, for breeding the Black Lark, *Melanocorypha yeltoniensis*, in 1899.
- „ VI., p. 217. The Rev. C. D. FARRAR, for breeding Barraband's Parrakeet, *Polytelis barrabandi*, in 1900.
- „ „ p. 270. The Rev. C. D. FARRAR, for breeding the Indigo-bird, *Cyanospiza cyanea*, in 1900.
- „ VII., p. 29. Mr. L. W. HAWKINS, for breeding the Cuba or Melodious Finch, *Phonipara canora*, in 1900.
- „ „ p. 32. Mr. L. W. HAWKINS, for breeding the Masked Grassfinch, *Poephila personata*, in 1900.
- „ „ p. 45. Miss R. ALDERSON, for breeding the Lavender Finch, *Lagonosticta caerulea*, in 1900.
- „ „ pp. 165 & 215. Mr. D. SETH-SMITH, for breeding the Cape Sparrow, *Passer arcuatus*, in 1901.
- „ „ p. 191. Mrs. JOHNSTONE, for breeding Leadbeater's Cockatoo, *Cacatua leadbeateri*, in 1901.
- „ „ p. 192. The Rev. C. D. FARRAR, for breeding the Andaman Starling, *Poliopsar andamanensis*, in 1901.
- „ „ p. 197. The Rev. C. D. FARRAR, for breeding the Black-headed or Pagoda Mynah, *Temenuchus pagodarum*, in 1901.
- „ „ p. 217. Mr. W. H. ST. QUINTIN, for breeding the European Roller, *Coracias garrulus*, in 1901.
- „ „ p. 219. Mr. A. E. NICHOLSON, for breeding the Rufous-tailed Grassfinch, *Bathilda ruficauda*, in 1901.
- „ VIII. p. 39. Mr. J. L. BONHOTE, for breeding the Spotted Eagle-Owl, *Bubo maculosus*, in 1901.
- „ „ p. 65. Miss R. ALDERSON, for breeding the Orange-cheeked Waxbill, *Sporocingthus melpodus*, in 1901.
- „ „ p. 212. The Rev. C. D. FARRAR, for breeding the Many-coloured Parrakeet, *Psephotus multicolor*, in 1902.
- „ „ p. 246 & Vol. IX., p. 15. Mr. PHILLIPPS, for breeding the Blue Wren, *Malurus cyaneus*, in 1902.*
- „ „ p. 249. Mrs. JOHNSTONE, for Breeding the Barnard's Parrakeet, *Barnardius barnardi*, in 1902.
- „ „ p. 264. Mrs. HOWARD WILLIAMS, for breeding the Ringed Finch, *Stictoptera annulosa*, in 1902.
- „ „ p. 285. The Rev. C. D. FARRAR, for breeding the American Catbird, *Galeoscoptes carolinensis*, in 1902.
- „ „ p. 289. Mr. PHILLIPPS, for breeding the Australian Waxbill, *Aegintha temporalis*, in 1902.*

Vol.VIII. p. 295. Miss R. ALDERSON, for breeding the White-winged Zenaida Dove, *Melopelia leucoptera*, in 1902.

NEW SERIES.

Vol. I., p. 317. Mr. D. SETH-SMITH, for Breeding the Greater Button-Quail, *Turnix tanki*, in 1903.

„ „ p. 366. Mr. L. M. SETH-SMITH, for breeding the Rain Quail, *Coturnix coromandelica*, in 1903.

„ „ p. 393. Miss R. ALDERSON, for breeding the White-fronted Dove, *Leptoptila jamaicensis*, in 1903.

„ „ p. 400. Mr. W. H. ST. QUINTIN, for breeding the Ruff, *Pavoncella pugnax*, in 1903.



RUFOUS-BELLIED NILTAVA.
Niltava sundara.

Mintern Brps. imp.

The male from a living specimen in the possession of Mr. Russell Humphrys.

Avicultural Magazine,

BEING THE JOURNAL OF THE
AVICULTURAL SOCIETY.

New Series.—VOL. II.—No. 1.—*All rights reserved.*

NOVEMBER, 1903.

THE RUFOUS-BELLIED NILTAVA.

Niltava sundara.

By RUSSELL HUMPHRYS.

In the *Avicultural Magazine* for November, 1902, a short account was published of the male bird, illustrated in this month's number. Privately imported by one of our members, it came into my possession in the early summer of last year, and has, up to the present time, always been the picture of health and condition.

Although it is always difficult to draw definite conclusions from one example, it seems obvious that *Niltava sundara* is not a particularly delicate cage bird. In comparison with our British Flycatchers it is practically hardy. During the recent summer, the subject of Mr. Grönvold's beautiful plate has been placed outdoors all day, and has, during that time, successfully accomplished his second moult without the least apparent inconvenience. The moult has each year been completed by the end of July, and the bird in song again during August.

In the previous article published it was stated that *Niltava sundara* warbled agreeably, reminding the writer forcibly of the Red-backed Shrike; this has been subsequently confirmed, although perhaps the notes of the former bird are stronger and more varied. A voracious appetite for soft fruit and a marked partiality for all live insects are the chief characteristics of his diet.

NESTING OF THE WAXWING IN CONFINEMENT.

By W. H. ST. QUINTIN, F.Z.S., M.B.O.U.

The Waxwing (*Ampelis garrulus*) has always been a favourite of mine, although, until I discarded all food of a farinaceous nature from it's diet, I never succeeded in keeping this bird long in satisfactory health. That I have now hit off a suitable regime is I think proved by the fact that I have, in a garden aviary, a pair of Waxwings in splendid order, which have twice hatched young this last summer.

So much interest has always attached to the breeding habits of this charming inhabitant of northern forest lands, and so much mystery, until Mr. Wolley's discovery,* that I may perhaps be pardoned for describing in some detail my birds' operations, even though under very artificial conditions.

On May 24th, I first noticed these two birds feeding each other (or rather the one which afterwards turned out to be the cock feeding his companion), and going through other performances suggestive of a wish to go to nest. I did not take this very seriously until I found that they were driving some other individuals of the same species, and showing so much excitement that I nailed the head of a spruce tree to one side of the aviary, and suspended an orchid basket dressed with yew twigs from the roof, supplying such materials as are said to be used by the wild bird, except that at that time I had not any of the long tree lichen, or Old Man's Beard, a supply of which arrived from Scotland too late to be of any service.

To my delight on June 16th, I saw one of the Waxwings go into the swinging basket, and, by moving its body and wings, shape a hollow, as if for a nest. The other three birds were looking scared, and sitting on a low branch near the ground, so we removed them.

Next day the pair had carried material (grass bents) into the basket, and the nest looked more compact, and had assumed a more definite shape. This went on for the next few days, the

*See Mr. Phillipps' letter in the September number of the Magazine.

birds becoming exceedingly bold and tame, and by the 22nd the nest was apparently complete, a considerable amount of pieces of dried shepherd's purse, chickweed, fine rootlets, and dead grass having been accumulated, and a lining made of feathers and rabbit's fur.

I should add that by this time we had seen the birds pair more than once, and were able to say for certain that one which had been badly mauled by a brown owl through the wires of the aviary, and still carried a mark where the feathers were permanently disarranged, was the female.

The male's "show" was all this time very beautiful. With crest fully erect, and wings and tail spread and drooping, he would hop round his mate as she sat crouching on a branch with a mealworm in his beak, as it were tautalising her, and exhibiting his lovely plumage to the best advantage, before he dropped the gift into her expectant mouth. The notes of the birds did not differ during the nesting period from the ordinary twitter heard at other times.

On the 23rd of June a high wind, from an unusual quarter, spun the hanging basket round, and seemed to upset the birds; for they transferred their attentions to the spruce tree, into which we fixed a Mistle Thrush's nest as soon as we saw that they were neglecting the first nest. On 27th they were lining the Thrush's nest with feathers. We then ventured to examine the nest in the basket by means of a small mirror fastened to a stick, and to everybody's huge delight a beautiful egg was seen. I need not say how carefully this was blown, and it was immediately sent up to our Hon. Secretary for inspection, who had all along showed much kind interest in my birds' proceedings.

On the 28th in the early morning the male was sitting in the nest, and this was the only occasion when we saw him there. On the 30th June the hen began to sit steadily. On that day I saw her, after chasing the male (for food?) go on again, arranging herself so that I felt sure that she had a clutch of eggs under her. On the 14th of July the male was noticed to be very bold, and excited, jealously driving off any other birds (Bearded Tits). On the next day young birds were seen being fed. The period of incubation may therefore be taken as fourteen days.

All went well for the first few days, from July 14th, the hen (alone) taking mealworms out of the pan, killing them, and presently disgorging them into the throats of the three young. But, sad to say, on the 17th, a change took place. The parent, instead of delivering partly-digested or crushed mealworms, kept dropping freshly-killed ones into the mouths of the young, which seemed unable to swallow them. They let the worm drop into the bottom of the nest, whence the hen would pick it up, and very patiently repeat the process eight or a dozen times before she gave it up, and went off to the pan for a fresh supply, only with the same result. Chopped mealworms, and selected small ones, and some small caterpillars were provided, and were taken up to the brood by the parent, but it was no good, they were not swallowed. Meanwhile my man could see that the young were getting visibly weaker. So, as the old birds were very tame, he thought the only chance was to give them a little help by hand. At intervals of an hour he offered them fresh ants' eggs, fresh egg yolk, scalded sultana raisins, but chiefly soft white mealworms that had just changed their skins. But there was great difficulty in getting the nestings to swallow even the smallest morsel; and, when they did get anything down, it was nearly always thrown up again.

On the 18th, the little ones were dead, and there was a clear egg left besides, making up the usual clutch of five, (counting the egg left in the first nest).

The throats of the young after death seemed swollen, and slightly inflamed. What can have caused this I cannot imagine. It is true that on the day on which the young were first seen to be amiss the heat was great (max. in shade 75 degs.) And as the nest was within a couple of feet of the glass roof, the hen bird felt it much, for she brooded the young with her mouth open. But I cannot think that excessive heat alone, all the surroundings being perfectly sweet and wholesome, could induce an inflammatory throat affection. However, as a precaution, the glass over the nest was removed, and some perforated zinc put in its place.

Five days after the dead bodies of the little birds were

removed the pair relined the nest; and on the 25th July the hen was sitting again on three eggs. Perhaps the strain upon the birds of the second nest so late in the season, and when the moult was due, was too much; for only one young one was hatched this time, the other two young dying, after chipping the shells. On the evening of the same day my man, having reason to think that the young bird was not being fed, removed it and placed it under the care of a Yellow-Hammer, which he happened to know was just hatching. Here it seemed to be doing satisfactorily until Friday (it was hatched on Sunday August 9th), when it was found to have swallowed a horsehair from the lining of the nest. There were five inches within the body of the poor little thing, and, though the hair was drawn out with all possible care, the operation was a severe one, for the hair (from the action of the gizzard?) was twisted into a spiral, and came up with difficulty. The nestling seemed much exhausted, and it is not to be wondered at that it was found dead next morning.

I am glad to say that the old birds have completed their moult, and seem perfectly sound and well. I shall of course try to alter their treatment somehow on the next occasion, if I am lucky enough to have another nest.

I should have said that, perhaps stimulated by their companions' example, two of the other trio were seen feeding each other, and also carrying nesting material; but, though we gave them every opportunity, nothing came of it in their case.

It is perhaps exceptionally interesting that, owing to the light blemish above described, my female bird can always be distinguished from her mate. Otherwise I confess that I cannot see any difference either in the general plumage, or even in the ornamental, waxen appendages, or golden feathertips, between the two birds.

THE LESSER BIRD OF PARADISE.

By GRAHAM RENSHAW, M.B.

Aviculturists have hitherto enjoyed but few opportunities of studying Birds of Paradise in captivity: indeed the rare occasions on which living specimens have arrived in Europe may almost be counted on the fingers of one hand.

Many years ago two examples of the Lesser Bird of Paradise (*Paradisea minor*) were brought home by Mr. A. R. Wallace. The Twelve-wired species (*Seleucidés nigricans*) has once been exhibited at the Zoo, and the Great Bird of Paradise (*P. apoda*) was represented there last summer. In 1901 I saw a fine adult



Drawn from a sketch by GRAHAM RENSHAW, M.B.

Paradisea minor, ♂ juv.

SUNNING ITSELF.

apoda in Liverpool, the only survivor of several which it had been attempted to bring over. Abroad, a specimen of *P. apoda* was exhibited in the Berlin Zoological Gardens in 1899. This list is but a meagre one at best, so that the following notes on the young *P. minor* living at Amsterdam may be interesting.

At the time of my visit the bird was apparently about three years old, and was just completing moult. The head was partly covered with minute prickly brownish feathers and partly with pale creamy feathers of a velvety texture. There were no long floating plumes springing from the sides of the body as in the adult, but the long wire-like rectrices were already apparent as two slender filaments in the centre of the tail. Since Birds of Paradise are usually studied from dried skins only, it was interesting to note the colour of the various structures during life. The iris was pale gamboge yellow; the beak and feet leaden colour, the latter being faintly tinged with pink. The tongue was also leaden colour and *quadrifid* (not bifid) at the tip, each of the two rami into which it was split being themselves also minutely bifurcated. The roof of the mouth and posterior edge of the palate were beset with spiny elevations, probably to assist the bird in holding its food.

This specimen was fond of basking in the sunshine like a Glossy Starling and sat almost upright on its perch, with its head turned to one side, and the wings extended and drooping as if to present as large a surface as possible to the sun's rays. It was very ill-tempered, and on being approached kept up a most disagreeable croaking like a spoilt child that does not wish to be meddled with. The Dutch keeper said that it had already been three years at Amsterdam, so that its temper would probably grow worse with age: it continued to make its unpleasant noise almost the whole time that I stood by taking notes, and was ready on the least provocation to recommence its efforts. The bird appeared to be in excellent health. It was very fond of mealworms, and was also fed on chopped hard-boiled egg, grapes, carrots and dates.

NESTING OF THE WHITE-FRONTED OR VIOLET
DOVE.*Leptoptila jamaicensis.*

By Miss R. ALDERSON.

(Continued from p. 397, Vol. 1., New Series).

Three days after the first young Violet Dove had left the nest, the second one followed. For some hours it had been getting restless, and late in the afternoon it descended in safety. This second bird (which I take to be a hen) was smaller in size than the first young bird, and whiter on the forehead. I had a thick bed of straw put down in one corner of the aviary just below the nest, and an L shaped piece of floor boarding 11 inches high enclosing it. This protection can be made in two separate pieces, the ends shaped so that after being fitted together they can be held by a single nail; made in this way, they are more convenient for storing away in the winter. I find these cribs splendid for keeping young birds in safety when they first leave the nest. The cribs should be a good size, say 4ft. by 3½ft.

For the further protection of the baby Violet Doves, I also put an empty box in one corner of the crib with a small doorway at one end. They were fond of retiring in here and nestling in the hay inside, and by just raising the lid I could always see if they were all right.

It is a good plan to always put a thick layer of straw under a dove's nest directly the young birds have hatched. It will be a great protection to them when they leave the nest, as, if they fall heavily on to a hard floor on their first attempt to venture out, it may cause a broken leg or wing. During the past summer, before I adopted this plan, I had a fine young Half-collared Turtle fatally injured in this way.

Photograph No. 1 (see last number) was taken when the two young birds had just left the nest. Their colouring was as follows:—Eyes brown; forehead, throat and breast, whitish drab; back and wings chocolate brown, with chestnut spots on the wings (like the spots on a Necklace Dove); under parts white;

outer feathers of tail white; remainder of tail grey brown; legs dirty flesh-coloured; length between six and seven inches.

The old birds took the greatest care of their young ones, and "Bessie" would sit on the straw in the sun with a baby dove on each side of her. Strangely enough I don't remember ever seeing the young birds being fed. The eldest I first noticed pecking seed when it was a month old.

On July 11th we had a most terrible storm with thunder, lightning, and a torrent of heavy rain. I hurried down to the aviary fearful for the safety of the young Violets, and to my surprise found the young cock thoroughly enjoying himself and spreading out one tiny wing to catch the rain. Both young birds got very wet but took no harm.

The spots on the wings had almost disappeared by July 21st, and ten days earlier I had noticed the sheen coming on the neck of the elder young one—and a few days later on the second also. The violet patch also began to show, and by the end of July there was not really very much difference between the old and young birds.

The latter quickly learnt to come to me for bits of peanuts, and were as fond of this dainty as their parents. It was by using this inducement that I managed (on August 1st) to take photograph No. 3. The bird in the foreground is "Narcissus," that on the right (and also in photograph No. 2) is the young cock.

I find Doves, Quails, and even small birds delight in cut-up peanuts, and I think they are a very wholesome addition to their usual diet. I cut up my own nuts at first, but it took up a good deal of time. Later I found they could be procured from Messrs. Armitage, seed merchants, Nottingham, ready ground, for 4/- per stone, carriage extra. I now buy the nuts by the stone and use them regularly.

The Violet Doves nested again but failed to hatch their eggs. I think the young ones were partly to blame as they would keep returning to the nest. Since then the Doves have again nested and had two eggs, but, as I am writing this from

home, I do not know how they have fared. * Both the old birds are in fine condition, though their plumage has got a little worn with both sitting on the nest together.

When pleased, the Violet Doves have a habit of raising their wings and quivering them very rapidly: the young birds soon learnt to do the same, and it was a pretty sight to see all four birds with their wings in motion when I threw them down some peanut.

Before I close I may just add how very useful I have found Tibbs' Quinella for young birds just out of the nest. Often when they first come out they take a chill, which quickly changes to internal inflammation; the young one becomes very relaxed and possibly lame in one leg, and if not seen to soon droops and dies—for the parents *will* not tend an unhealthy bird; I have also found this remedy very effectual with other young birds. Full directions are given with the medicine, and the birds do not seem to mind drinking it. Though it is not well to handle young birds, a careful watch should be kept on them when just out of the nest, so that any mischief may be checked in time.

RAMBLES AMONG THE WILD BIRDS (No. III)

By the Rev. F. L. BLATHWAYT, M.B.O.U.

ON HIGHLAND LOCHS.

“Land of brown heath and shaggy wood,
Land of the mountain and the flood.”

The lovers of our British wild birds who dwell in the southern parts of our islands are probably well acquainted with a number of species which come as visitors from Autumn to early Spring, but which depart with the advent of the breeding season and travel northward to regions where they bring up their young. Some of these species push so far North, even into unexplored regions around the Pole, that their nesting habits are very imperfectly known or even entirely shrouded in mystery;

* On returning home I found that the Doves hatched their eggs, but the young birds soon died. My bird man tells me that they looked as though they had been crushed, so possibly they were smothered by the old birds sitting together on them.—R. A.

but there are others which do not entirely desert the British Islands, but leave some of their number in the North of Scotland where they lay their eggs and rear their broods.

It was with the object of seeing some of these winter visitors to the South in their Summer homes that my brother and I journeyed northward last May to spend a fortnight's holiday in Sutherland. When the long train journey was over there were yet more than 20 miles to be covered by coach before our destination was reached. This was through a country of very varied scenery. Lofty mountains, still capped with snow; swift salmon rivers running through rocky and well-wooded straths; bleak water-sodden moors; lochs, some small and nestling on the shoulders of the mountains, others more extensive and dotted with birch-clad islets; all these presented features unfamiliar to the dweller in the South, and gave promise of affording a Summer home to many interesting species of birds.

A good deal of our time was spent in trout-fishing on the beautiful lochs of West Sutherland, and so it was with those birds which haunt the lochs—that we became most familiar. We very soon found that we were not alone in our attempts to beguile the wily little trout. We had a most conspicuous and very successful fellow fisherman in the Black-throated Diver (*Colymbus arcticus*). A pair of these fine birds were to be seen on most of the larger lochs of the neighbourhood, and very handsome they looked in their smart Summer plumage, quite different from the more sober-coloured dress they wear during their stay in southern waters. We found two nests of this species, each containing a pair of long-shaped, olive-brown eggs, dotted with a few black spots. In both cases these had been laid on tiny islets in the lochs, and were placed in shallow depressions, scantily lined with moss and weeds, only a few feet from the water's edge.

A good deal has been written about the position of the Divers and their allies the Grebes, when on land, so we determined to watch one of these birds leave the water and go to her eggs, and so settle the question for ourselves. This, however, we found to be no easy matter, for the birds were so shy that they would not approach the nests while we were in sight.

One day, however, we had more success. Knowing of a pair breeding on a small hill loch which only contained one islet, we determined to creep up very quietly in the hopes of seeing one of the birds on land. The excitement of that stalk was very great. A long detour was first of all necessary; and then we crawled to the top of some rising ground, overlooking the loch, and crouched behind a pile of rock, which much resembled a Dartmoor 'tor.' Over this shelter we raised our heads inch by inch, and soon saw the Divers on the water near their island home. They evidently had no knowledge of our approach for we had not waited a minute before one of them, probably the female, swam towards the islet and settled down upon her eggs. Two strong pairs of field-glasses were "glued" upon her as she left the water, and so every movement could be clearly followed. She scrambled awkwardly over the stones in the shallow water and then crossed the five or six feet of turf between the margin and her eggs by shuffling along on her breast, using her legs and feet to propel her much as she would do in the water, and never once standing upright. There was nothing graceful about the performance, and it was pretty evident that the bird was not at all at her ease on land. On reaching her nest she raised her breast slightly and took a few seconds arranging her eggs comfortably beneath her before she settled down. We then showed our heads over the rock and expected she would leave the eggs at once. Her mate gave a hoarse croak of alarm, but the sitting bird appeared afraid to move at first, and kept twisting her head about in all directions as if uncertain what sort of danger threatened her. When we advanced towards her she shuffled awkwardly off her eggs, scrambled hurriedly along on her breast towards the water and instantly dived, coming up again in the loch at some distance from the islet. After watching this bird on the land, it seemed to us that it would have been quite impossible for her to sit up erect, in the way in which this class of birds may so often be seen set up in cases or represented in pictures.

The other pair of eggs we saw were placed on a very small islet in a much larger loch, and were laid so close to the water that a slight rise would certainly have covered them. A few feet away was a nest and eggs of the Greater Black-backed Gull

(*Larus marinus*), and also two or three nests of the Common Gull (*Larus canus*). We had misgivings as to the safety of the Divers' eggs when we saw the Black-backed marauders standing only a few feet off them, but apparently they had no hostile intention, as the Divers' eggs were safe when we visited the islet a few days later. It seems that there must be some sort of etiquette among different species of birds breeding in close proximity. These large Gulls are noted for their partiality for eggs, and yet these three species were dwelling on this tiny islet, apparently in perfect harmony.

It will be gathered from what has been written above that the actions of the Black-throated Diver on land are anything but graceful; but in the water quite the reverse is the case. The bird is beautifully adapted for an aquatic life, and, except when incubating or flying in the air, probably never leaves the water at all. When alarmed, these birds sink their bodies and swim rapidly along with the water rippling over their backs, and scarcely any part of them but the head and neck showing above the surface. They dive repeatedly, and stay a long time beneath the water, often reappearing far away from the spot where they vanished. The dive is not always a distinct forward plunge, as is the case with the Diving Ducks, but, especially when alarmed, the birds seem merely to bend the head and neck into the water and so sink out of sight, scarcely leaving a ripple upon the surface.

The Divers, though they have some difficulty in rising from the water, fly well and very rapidly. We often saw a pair of them circling high over the lochs while we were fishing. They carry their necks stretched out in front and beat their wings quickly, the mode of flight resembling that of the Ducks, but they have a curious appearance in the air in consequence of the wings being placed far back in their bodies. Just before the birds descend to alight on the water, they set up a harsh quacking noise, uttered very rapidly, but resembling somewhat the quacking of a farmyard Duck. As the birds dash down very swiftly into the water their note is somewhat drawn out, and may be represented by the words "Quarra-quark," "quarra-quark," the accent being on the last syllable.

These birds were a constant source of pleasure to us, and often while fishing we would lay down our rods and watch their habits through our glasses. The bird-life around us was in fact so interesting that the weight of our creels, when we started for home, was often far less than it might have been.

In the mornings, as we tramped over the water-sodden moors towards the loch, for the day's fishing, the rippling wail of the Curlew (*Numenius arquata*), and the clear call of the Golden Plover (*Charadrius pluvialis*) could be heard on either hand. Suddenly a Grouse (*Lagopus scoticus*) would blunder up, covered with confusion, almost under our feet, and shout to us a hurried but unavailing "Go-back" "Go-back," as he skimmed over a shoulder of rising ground. Then a little black-breasted Dunlin (*Tringa alpina*) would spring from the side of some tiny pool, with a harsh "cree," and dart away to the loch-side, uttering while alighting on the margin, a long-drawn trill sounding like a rusty electric bell.

As we crunched over the boulders and shingle to the little stone jetty where the boat was moored, the startling double cry of the Greenshank (*Totanus canescens*) or the mellower note of the Redshank (*T. caldriis*) would ring out over the water, as the birds gave the note of alarm to all the dwellers on the loch. The Gulls then (*Larus canus*) would rise in a cloud from their nests on the islands, and wheel in circles overhead amid a medley of querulous and musical cries, the harsh croak of the Greater Black-backed Gull, and the 'how-how-how' of his lesser relative (*L. fuscus*) helping to swell the chorus.

As the gillie bails the rain-water out of the boat, we watch a pair of Common Sandpipers (*Totanus hypoleucus*) flitting with mournful, long-drawn cries, from stone to stone, anxious for the safety of their young, which are doubtless crouching among the pebbles at our feet. Suddenly the shrill 'whee you' of a Drake Wigeon (*Mareca penelope*) sounds from above as the smart little fellow comes to have a look at us, and warns his comrades that we look dangerous. His sombre-coloured mate is doubtless nesting on one of those lovely birch-clad islets, the buds of the trees now just showing pinkish-brown over the silver stems, but

here and there, where they have burst, veiling them with a green smoke. On one of these islands we land for lunch after the morning's fishing is over.

Above us, in a low birch tree, is a nest and eggs of the Hooded Crow (*Corvus cornix*), whose crafty owner thinks, no doubt, that here she may escape the vigilance of the keeper. The plaintive silver chime of the Willow Warbler (*Phylloscopus trochilus*) and the melancholy chirping of the Reed Bunting (*Emberiza schœniclus*) remind us of more southern regions; presently, as we walk over the ground studded with pale primroses and golden marsh-marigolds, up springs a Duck from a russet patch of last year's bracken. No, she is not the Wigeon, but a Common Wild Duck (*Anas boscas*). That is our verdict as we watch her with our field glasses while she hurries away, and the eight greenish eggs she has left add weight to our decision. But Wild Ducks' nests we have often found in the South, and we want to see the Wigeon's nest, so the boat is taken across to the next islet, and we proceed to search carefully all likely places. Suddenly there is a flutter at the foot of a birch tree, and a small dark-brown Duck bustles up and speeds away across the loch. 'That's the Wigeon, anyhow,' we exclaim in delight, and our glasses soon shew us that we are not wrong. Looking at the eight eggs, we see they are quite different from those of the Wild Duck we have just seen. There is no trace of green about them, but they are of a clear creamy-white, and make a beautiful picture as they nestle snugly in a deep cup of dark smoky down, with light centres and whitish tips.

But it would take too much space to write of all the feathered inhabitants of these beautiful pieces of water. Among the reeds and grassy tufts, or on the open pebbles near their margins, the Redshanks, Curlews, Snipe, (*Gallinago caelestis*) and Lapwings (*Vanellus vulgaris*) were busy with their nests or young. There, on a stone, sits a Cormorant (*Phalacrocorax carbo*) satisfied with his meal of trout. Near the shore swims a Red-breasted Merganser and his mate (*Mergus serrator*), and overhead, to the accompaniment of cackling cries, flies a 'skein' of grey Lag-geese (*Anser cinereus*), visitors from a distant loch

near the sea, where they nest on islands among the tall rank heather. And then, just to add the finishing touch to the scene, a magnificent Golden Eagle (*Aquila chrysaetus*) sweeps overhead from his eyrie among the mountains, and looks proudly down upon the loch as though to assert that he holds sway over all.

And so our day on the loch is over. The 'zulu,' and 'grouse-and-claret' flies have done their work, and some three dozen spotted trout, averaging three to the pound, lie in our basket. But though we have derived some pleasure, through arousing some latent instinct, while pitting our skill against the natural shyness of the little fish, yet we have secured a far more lasting joy from watching, without harming*, the birds of that beautiful loch in the far-away Highlands of Scotland.

THE SILVER-EARED MESIA.

Mesia argentauris.

By REGINALD PHILLIPPS.

(Continued from p. 390. Vol., I., New Series).

I will not weary our readers with the many notes I made, day by day, of the manner of the feeding by the parents, but some must be given, as they may be of help to others in the future. Here again we seem to see how birds *do* learn and profit by experience. With the first young, the parents carried (or appeared to) the mealworms to the nest—though I could not see what happened at the nest—now they did not but fed from the crop. Writing in September, just after popping a morsel of egg-flake into the little tot's mouth, I realize how tiny that mouth still is, how small the morsel must be that I offer, how fingers are useless and how the morsel must be given at the point of a pair of the finest tweezers; and then I consider how tiny that mouth must have been when the bird first emerged from the shell and how absolutely unsuitable as food is a lumbering mealworm. But mealworms, a limited supply of cockroaches, and

* *This is good work;* but the reckless killing of birds to make "specimens" is an abomination.—R.P.

later some live wasp-grubs, were everything in the way of insect life I was able to obtain. Only quite small cockroaches were eaten, for Mesias seem to have but little idea of breaking up food; and, as is so often the case, they would not carry the tiny ones. They had, moreover, the curious habit of nipping and killing usually every cockroach and mealworm supplied, though not otherwise touching them. After a while, both for themselves and the young bird, they preferred the larger wasp-grubs, not touching the small ones which looked too much like gentles; and artificial food they would not touch except occasionally some biscuit water-sop. I notice, too, how inferior the young Mesia's powers of swallowing are compared with, say, a young Shâma's of the same age. Wasp-grubs are too fattening as a sole food; a garden of earwigs, woodlice, ants, etc., would be of priceless value when such a species as the Mesia has to be reared.

On August 18 there was a great disturbance in my next-door neighbour's garden. The Virginia creeper from the house beyond spread very thickly over his house, and he decided that it must go. The large stems were sawn through where they commenced to trespass, the whole mass fell into the garden, and six men commenced to drag it bodily away. The thick foliage of my own garden completely sheltered the Mesias—and yet they deserted their offspring and disappeared. The disturbance was soon over, and they re-appeared on a perch above my head, the male kissing the female after his manner. Then he went to the nest, fed the young one from the crop, and brooded it. In this instance neither of the birds had been near the food dishes for several minutes, and yet the male fed from the crop as a matter of ordinary course. Their mode of doing this was instructive. The parent would hold its head down for several seconds, with the mandibles very slightly parted, repeating the operation several times, regurgitation being sometimes but not always very marked. I am positive that there was some secretion which ran out of the crop, or came out from it, and which more or less lubricated any insect that had been previously swallowed. On one occasion, while the male was thus feeding, a tiny cockroach "came up," as if by mistake, for he instantly checked himself, re-swallowed the cockroach, and then again lowered his head.

On a later occasion, I found him doing all he could to induce the young bird to swallow a mealworm carried in his bill, but he signally failed; I watched him for about half-a-minute, when he swallowed the mealworm himself. After a pause, he regurgitated and fed successfully. On another occasion the female took up a small cockroach, mandibulated and swallowed it. She then flew to a piece of bare ground, a wet mound, and pecked about, the only food visible being a few stray Indian millet seeds. Then she hopped about the boughs, slowly getting nearer to the nest, as if to allow time for digestive work of some sort before she finally fed the young bird, the regurgitating movements being very apparent.

At first the male seemed to wish to monopolize the youngster; and when the female came to feed she would peck him without stint, though not spitefully, as if to teach him how to act. After they had got into good working order, the following was the mode of procedure. One parent, ready to feed, would approach the nest with a whispered twitter; the sitting-bird would come off; the new comer, perched at first on the edge of the nest but, later, on one of the supporting twigs (was this change just a matter of intuitive instinct, or the result of thought set up by apprehensiveness of weakness in the upholding bands?) would feed the young one, and then would suddenly "flop" on to the nest with a single movement. In due time the other bird would return, and the same routine would be followed. I think I may say that, although so assiduous in his attentions, the male was rather more inclined to be rough and off-hand, the female being tender and more gentle; and she acted the part of nurse with great care.

I have referred to the temporary desertion of the young bird by the parents on an occasion when there was no cause for fear. It was on that day that I first heard the alarm rattle, which was sounded very briskly indeed by the male. Just a week later, as I was dressing, I again heard him sounding an alarm. I peeped out of the window, not a cat was to be seen, and all *looked* quiet. But the old boy was rattling away with might and main, the Blue Wren was uttering his little alarm-cry, and many birds were clattering. I hurried down, rushed

into the aviary—and saw a sight which absolutely sickened me. In the reserved aviary there still remain two upright posts, relics of a long-disused gymnasium. Composedly and unconcernedly there was sitting on the top of one of these posts a Burrowing Owl. My old father Owl is an Owl of good parts, splendid after mice; and there was not a bird in that aviary, including and especially the Quails and Hemipodes, that he would not readily strike and drag down into his *Inferno*—and he was down below then. The aviculturist with insufficient accommodation has many difficulties to contend with which are unknown to his brother in the country. I had thought that I had securely blocked up the Owls' subway into the far aviary, but by clever engineering they had got the better of me. The actual bird on the post was the son and heir to the lower regions hereabouts, a very enterprising youth but too young and inexperienced to do much harm, and really he seemed to be the only one that had got through. As I darted for the net I glanced at the Mesias' nest, and noticed that the mother was sitting as tight as glue. Poor little man; hitherto (like other rackets boys, he had a way of getting into difficulties) I had handled him so lovingly and gently; and his amazement and consternation were great when I whipped him up without ceremony, seized him anyhow, anywhere, my one thought being to bundle him out of the aviary as quickly as possible. A little later the male Mesia came to the nest to feed, but the mother would not move, and did not uncover her darling until quite a considerable time afterwards.

On August 23, a fine afternoon, noticing both birds off the nest, I peeped in, and there were one young bird and one egg, the latter more or less on the top of the bird. On the 26th I peeped again, and took the egg, which was on the top of the young one and must have been a great nuisance; and yet the parents had not sufficient gumption to remove it. This egg was practically a counterpart of the one already described, but it was a little longer, the spots were more red, and there were a few very sparsely scattered over the egg generally.

I could not fail to notice how squat the young bird lay at the bottom of the nest, and how it did not rise on the approach of the feeding parent. Not infrequently I observed the mother

examining it with manifest solicitude, and I felt something must be wrong; and days passed by and it still remained in the nest. But an enemy brought matters to a crisis—a little way that enemies have of helping us by over-reaching themselves.

On the morning of the 30th, as I was taking my bath, I observed three cats on the roof of the aviary. With a garden syringe and so convenient a supply of water, on throwing up the window, I speedily and with much valour repelled the invaders. While dressing, I noticed that the young Owl already referred to, who was on the perch close to the nest, was bobbing and rolling his head about, evidently much interested in what was going on thereat. When I came down, the parents at once betrayed that the young bird had flitted, and I soon found it in a damp hollow in the ground some three yards away. Rain was threatening too, so I placed it in a nest of hay in a box, under a shed—for the poor little creature was a cripple (rickets?) and nearly helpless. After breakfast I found it about four yards farther on, in a sheltered spot, so there I left it until the afternoon. Then I arranged a larger open box with high sides, hay covering the bottom; and this was the youngster's home up to the day of its death. The box was raised on a pedestal; and during the day when fine it was placed in the open, at other times under the shed. The fattening wasp-grubs were telling on its health, so I endeavoured to shorten the supply, hand-feeding it when I could spare the time with egg-flake, etc., dipped in diluted fluid magnesia.

On the day that the young bird left the nest, and for a day or two afterwards, the parents uttered several new little calls and whispers as, with wasp-grub in bill, they endeavoured to coax it to follow them up into the trees; and from that day, and for several days afterwards, I would hear a low plaintive call-song of four notes, "Come Dearie do"; but the poor little chap was unable to raise itself sufficiently from the ground to enable it to make a start with its wings.

Nest No. 5, commenced by the male on the evening of the day that the young bird left its nest, is close to where No. 3 was, and is in a "hand" at the edge of the holly, well concealed,

especially above, but in the full light of the afternoon sun. The birds have had enough of the Owls and gloom, of tossing billows and nests of doubtful stability, and long for a little brightness and warmth. It is not suspended, but fixed in the "hand," and firmly lashed to each of the holly "fingers" coming up around it. These latter come up so close to the nest as to render unnecessary any such cables as held No. 2 (and doubtless No. 1) in position. From the remarkable manner in which these birds so securely fix their nests, one feels inclined to suppose that their ancestors must have been in the habit of nesting in localities where storms and hurricanes were not unusual. From the look of the female on September 7, she was then about to lay.

And now I must bring this long account of the nesting of the Silver-eared Mesia in the *rain* of H.M. King Edward VII. to a close—a very long but really only a skeleton account, for a book might easily and not unprofitably be filled with the story of this interesting species alone. The young Mesia died at 5 p.m. on the 7th September, apparently from apoplexy, but it has not lived its little life in vain, for it has taught us the plumage of the species in its first feather; and surely its parents have set us an example of patient perseverance under difficulties and disadvantages, and how to vary and adapt our work as circumstances may require day by day, and to do our work well, however adverse the circumstances under which we may have to strive.

On the 7th, after the death of the young bird, a very low mournful six-note wail came up occasionally from the Mesias' aviary.

But joy came in the morning, at any rate to the Mesias, for soon after dawn the light-hearted male was issuing his usual invitation to that hopeless boy—and in the afternoon, for the fifth time, the female commenced to sit, presumably upon one egg, to be followed by a second in the morning.

Immediately after its death, I forwarded the body of the young Mesia to Mr. Frank Finn, who most kindly furnished the accompanying Report. I may briefly state that, during life, the

eyes were *very* dark, and the legs, feet, and claws varying between light flesh-colour and light yellow; but all the brightness of the latter passed away with their owner's life.

"One may most easily describe the very interesting Mesia fledgling bred by Mr. Phillipps by saying that in its general colouration it strikingly resembles a cock Blackcap, *Sylvia atricapilla*, and shows very little of the characteristic beautiful colouring of its own species. The general hue above is smoky drab, with a well-marked black cap; the ear-coverts are silver-grey as in the adult Mesia, and the quills have light outside borderings, dirty cream-colour on the early primaries, passing into ochre-yellow on the secondaries. The smoky drab colour extends on to the breast and flanks, but the throat and centre of the abdomen are dull cream-colour, the throat verging slightly on yellow. There is a slight wash of olive-green on the back of the neck. Such little of the tail-feathering as has grown is dull black like the inner webs of the quills. The under tail-coverts are dull brick-red. The bill is dull flesh-colour, horny at the tip and gape, and the legs, feet, and claws dull flesh-coloured also. The iris has apparently been brown.

"This colouration is evidently not quite normal, as the parents themselves when I saw them some time ago struck me as having faded much in the same way as the *Liothrix* does; their beaks also were very pale, whereas the Mesia's beak should be bright gamboge-yellow.* The bird in the Parrot-house has still the bright hues of plumage and bill proper to the species, so that warm housing would seem to tend to retention of the colour in this bird.

"The black cap of this young bird is remarkable, inasmuch as Mr. Oates (*Fauna of British India*, Birds, Vol. I., p. 244) says that 'the young have the crown yellowish at first,' Relying on this, I stated in my article on the Mesia in the *Feathered World* of January 7th, 1900, that the young had not the black cap.

"This evidently is not an invariable rule; and I have noticed in India, where I had exceptional opportunities of

* As my birds' beaks now are.—R. P., 8.9.03.

studying young birds, that the young plumage is in many species decidedly variable, especially in respect to head-colouring. Thus, in the Paradise Flycatcher, *Terpsiphone paradisi*, the young is said at once to have a black cap; and so it has sometimes; but I have also seen it with the cap chestnut like the back, and it varied in birds of the same brood. Again in the Bank Mynah, *Acridotheres ginginianus*, the head of the young is described as drab; but I have also seen many specimens in which the head was black as in the adults, although not so deep and rich in tone. In the Blue-cheeked Barbet, *Cyanops asiatica*, also, the young usually show the red and blue colouration of the adult's head in a fainter form; but this is variable; and I have seen specimens where these tints were hardly apparent.

"It is thus evident that we must be prepared to recognize a good deal of discrepancy in the colouration of young birds, even in those bred in a wild state. I have seen it stated somewhere that the most vigorous young birds are those which tend most strongly to an adult colouration; but in the case of the present youngster this cannot be said, as it was a weakly bird—and no wonder considering the season.

"We must be careful not to attribute its dull general colouration to inheritance of an acquired character—the fading of the plumage of the parents. For obviously the same causes which have dulled their colours have acted on the young bird also from its very birth.

"At the same time it gives us some idea of the extreme rapidity with which a 'local race' may be formed when members of a species get into a different environment. Although it must be again borne in mind that differences such as characterize local races may often be seen in individuals of the same wild species living side by side; and also most aviculturists must have noticed that in captivity and under the same treatment some individuals will assume abnormal colouration and others retain their hues,"

FRANK FINN.

[I do not quite agree with Mr. Finn in one or two of his conclusions; and may not sex have something to do with the

differences in the colour of the caps? It may be unlikely, but it is not impossible. It is not quite to the point, but one cannot help thinking of the red-brown cap of the female Blackcap and of her young, the difference between the sexes being shewn in the cap at a somewhat early age. My young Mesia was almost certainly a male, and the colour on the wings developed steadily as the feathers grew until a day or so before death, when deterioration set in. When it left the nest, the nuchal collar was not visible, but later it was very apparent.—R. P.]

SUPPLEMENTARY.

The foregoing having been crowded out of the October Number, I may as well complete the story of nest No. 5.

As already stated, the female commenced to sit on the afternoon of September 8. On the 10th there was a terrible gale with torrents of rain; the foliage which protected the nest was blown to ribbons, and a part of the aviary above the sitting-bird was wrecked. If the sitting-bird kept to her nest all the night, as presumably she did, she had the full force of the gale and the rain right in her teeth, without any protection whatever. In the morning, she looked very much washed out; but the two birds went on with their duties as if a gale with bucketsful of rain was quite too ordinary a matter to be worth talking about; nevertheless the male seemed much concerned at the exposed state of the nest. On the 14th, the sitting-bird came off for some wasp-grubs, and I slipped round and found three eggs in the nest. The male caught me, and came up with a loud and menacing "quit, quit, quit."

There was very little singing during this nesting-time, probably owing to the cold and moult. They freely came off the nest, too, when I approached the aviary, and cried out loudly if I did not give them wasp-grubs—but my stock became exhausted.

On the 22nd and following days they were feeding a young bird, but not once from the crop that I could see. Why this change? Perhaps the moult had something to do with it! Or

was it simply that, having got into the habit of feeding the last young bird with wasp-grubs—which had to be carried and given whole—they had learned a bad lesson, and continued to carry and feed with the whole insect? And this is not unlikely, for I noticed that when I brought in a pan of mealworms, no matter how many there might be, should there be a white one (new skin) it was immediately picked out, doubtless from its similarity in colour to the wasp-grub. Thus it would seem that we may teach bad habits to our birds.

They would take a mealworm, hold it under one foot, gradually shorten it working from the head, and then carry it to the nest and present it as it was to the youngster.

Towards the end of the month, for several days, they were greatly disturbed by a large noisy dog being introduced into the next garden, and both birds frequently left the nest to cry at the enemy.

On the 2nd October it dawned upon me that for two or three days the male had given up sitting. I had been too busy to watch, and am not sure when he deserted.

He was in full moult; and I wondered if he found it too cold to sit on the nest, and so the female had taken up his work in addition to her own. I did not see the female leave the nest once until the morning of the 3rd, when I found the nest deserted.

There were two eggs in it, but I could not find any trace of the young bird. I suppose it had died and been removed; the male was too wise to sit on the two clear eggs, and eventually the female (also in full moult) had likewise given them up as hopeless. From early morn and all day, on the day that the female ceased to sit, a mournful four-note song or call was often uttered, and is still occasionally heard. Poor little creatures: five nests—and not a single young bird reared to reward them for all their toil and labour.—R. P.

REVIEWS.

THE STORY OF A BIRD LOVER.*

The name of W. E. D. Scott is very well known to ornithologists, not only in America, where he holds an important official post in the Princeton University, but throughout the ornithological world. Professor Scott occupies a somewhat unique position amongst ornithologists, for besides being a cabinet worker he is one of the greatest field-naturalists in America, and an aviculturist. It goes without saying therefore that a full account of his life and many and varied adventures in the pursuit of ornithology is bound to be of considerable interest; and we can only say that the book before us is one of the most interesting that we have ever read. The author has travelled to many little-frequented parts of North America, as well as to Jamaica, often spending many months, or even years, in his far-off collecting-grounds.

Although Professor Scott has been a collector all his life, it can be truly said that the killing he has done has been done in the cause of science. He recounts with horror the shocking waste of life that has taken place to gratify the insatiable greed of fashion. When a youth he learnt to skin and stuff birds, as every collector must do unless he can afford the luxury of a paid taxidermist to accompany his wanderings, and on one occasion, being anxious to obtain employment, he entered the shop of a dealer in plumes, and asked for a job. The proprietor set him to work to skin a number of small song-birds, which he did so rapidly and well that he was engaged at £6 a week. Three months were spent in this shop, during which he skinned from one hundred and twenty to one hundred and fifty birds each day, these being brought in by the local gunners each morning, and consisting almost entirely of bright-coloured song-birds. These skins were delivered to dealers on cards which held four each, there being three cards in a box.

* *The Story of a Bird Lover*, by WILLIAM EARL DODGE SCOTT. New York: THE OUTLOOK COMPANY. Price 6/.

At the end of three months Mr. Scott decided to leave the shop and seek to obtain employment elsewhere, and before very long he was engaged to take charge of the natural history collection of the newly-formed museum of natural history connected with the School of Science at Princeton, from which has long since grown the Princeton University.

Of the habits of birds observed during his many wanderings, Mr. Scott tells us much that our members will read with intense interest. He viewed with the keenest delight the sight, never to be forgotten, of vast colonies, or "rookeries" of Herons and Egrets, breeding along the coast and lagoons of Florida, but he discovered with dismay, six or seven years later, that the whole of this "thing of beauty and priceless value, a never ceasing panorama of action suggesting emotions of a profound nature—all this was wantonly destroyed." The ladies who wear the fashionable sprays termed "ospreys" and "aigrets" have little idea as to how these are obtained. Let them listen to Mr. Scott:

"The time when the several kinds of Herons, known as Egrets, wear their decorated plumes is coincident with the nuptial season. Then nature adds to their charm and beauty these superb decorations. They are worn only for a brief period, perhaps six weeks or two months altogether, and during all this interval the birds are busied in mating, in nest building, in incubating their eggs, and in rearing and feeding their young. It is a comparatively easy thing to disturb birds and to drive them away at the period of nest building. Even when the eggs are laid, the old birds will often abandon them if slightly alarmed. When the helpless young are in the nest nothing short of a catastrophe will induce their desertion. The parental instinct and affection is now strongest; the perpetuation of kind, the great achievement of all life, is about to be accomplished. The consummation of that end, on which is based the strongest and most fundamental of animal passions, is about to be fulfilled. This is the time and season chosen by the plume hunter for his harvest. Now he realizes that the cries of the young birds, hungry in their nests, will surely bring the parents back at short intervals, no matter how frequently disturbed and frightened away. To accomplish his object more surely he avails himself of modern contrivances for killing. The almost noiseless Flobert rifle, with its tiny charge to speed the fatal ball, the gun whose report is hardly louder than the snapping of a twig, is his weapon. Stationed within ten or twelve feet of a nest both parents are secured

in a few moments, and then the next pair are dealt with in the same way. Continuous work of this kind from daylight to dark results in two things, a vast pile of carcasses of the dead parents, stripped of their beautiful plumes, and thousands of young birds left to starve to death in misery in their nests.

“Such was the scene that I saw repeated over and over and over and over again on my journey southward. Not only were the Heron rookeries dealt with in this way, but on one large island I counted scores upon scores of dead Brown Pelicans, stripped of their plumage, and in the trees overhead were countless nests, which at the time of my visit contained the bodies of young birds. Flocks of Buzzards slept, gorged, on the naked limbs hard by, attesting to the horrible slaughter by the countless dead they left untouched.”

But enough of this sickening story, we advise all our readers to peruse the book if they want a treat, especially let them read carefully the chapter entitled “A Naturalists’ Vision,” for Mr. Scott is a most enthusiastic aviculturist, with some four or five hundred birds which are kept under constant observation.

THE BIRDS OF SOUTH AFRICA.*

The third volume of this work has now been published some months, and quite equals the former volumes in excellence. Mr. W. L. Sclater is alone responsible for it, although the late Dr. Stark’s note books were at his disposal. The present volume treats of 183 species included in the orders *Picariæ*, *Psittaci*, *Striges*, and *Accipitres*. There are a great many admirable text-figures mostly by Mr. Grönvold. The fourth volume will complete this most useful work.

* *The Birds of South Africa*, commenced by ARTHUR STARK, M.B. Vol. III., by W. L. SCLATER, M.A., F.Z.S. London, R. H. PORTER.

CORRESPONDENCE, NOTES, ETC.

THE INFLUENCE OF DIET ON THE AVIAN DEATH-RATE.

SIR,—In answer to Mr. Phillipps' query I regret to say that I am bound to include dried egg in my condemnation of egg food.

Septicæmia, as occurring in its various forms in birds, is a very large and interesting subject, and covers too much ground to be traversed within the limits of one or two short papers. Unfortunately I cannot, for more than one reason, well duplicate my articles in both the *Avicultural Magazine* and *Bird Notes*, but those who are members of both Societies may with Hamlet begin to realize by the time they have finished them, that there is something more in heaven and earth than is yet dreamt of in their philosophy.

At present, owing to the want on their part of "much more information," they have no grounds open to them for criticising, since there is indeed much that is outside the purview of those who have only "experience" to guide them. For instance, the experience, not of one only but of many centuries, seemed to teach that the proper treatment in cases of phthisis consisted in stuffy, closed up rooms, and opiate cough mixtures. A little microscopic investigation has however been of considerably "more practical value" than all that experience—in spite of the opinion of one of my annotators to the contrary—inasmuch as not only has it taught us to recognize the potential germs of the disease in air and food and the effect of their development upon a receptive soil, but it has also demonstrated the correct method of meeting them to their ultimate discomfiture.

It is however not my intention to waste time on discussions with those who are not equipped with anything beyond "experience," which, as I have already pointed out in my original article, is common to all, and which, as though to show its true value, only succeeds in leading us all to different and often erroneous conclusions in these special matters of bird treatment.

W. GEO. CRESWELL.

SIR,—Having read Dr. W. G. Creswell's article under this heading, I must acknowledge that I have not suffered the shock that he anticipates, excepting that we are asked to accept as a fact that egg food is positively dangerous as an article of diet for birds, without the slightest explanation as to how this conclusion has been arrived at. That egg is a favourable medium for the reception of various kinds of germ life has been known for years. Taking for granted that Dr. Creswell is correct in his statement that egg food (not fresh and sweet I presume) does contain Bacilli which, when received into the alimentary track of a bird, will sometimes produce

enteritis, this by no means proves that enteritis cannot be produced by any other means or agents.

Cannot it be produced by copious draughts of cold water, wet or frosted green food, bathing in cold weather and remaining wet too long so that a chill is contracted? The first and second are frequent causes in horses and cattle, and why not in delicate birds?

Because the Bacillus of Typhoid has been found in oysters and this disease has occurred after the consumption of same, is no one to eat oysters? I think it is by no means an unreasonable surmise that many oysters containing similar Bacilli have been consumed and yet have not produced any bad symptoms. If egg food is as dangerous as Dr. Creswell suggests, it is a wonder that the many hundreds of fanciers and aviculturists have any birds left, as there are doubtless tons of eggs used annually. If we are to eat nothing which contains germs I am afraid our diet list will become very small.

The microscope is positively indispensable in pathological research, and it is well to know that certain foods are more genial to the micro-organisms which cause disease than others, but we must not lose sight of the fact that there has been provided an immunity, excepting under certain conditions, by which the higher organisms can repel the attacks of the lower forms. For instance the Bacillus of *tetanus* is frequently, if not usually, present in the alimentary canal of the horse, but excepting under certain conditions he suffers no inconvenience from its presence.

My experience, as well as that of others, is that seed eaters are more subject to enteritis than insectivorous birds, and, inasmuch as the latter would eat possibly a dozen times as much egg food as the former, it is strange to find the Doctor stating that *this* (egg) and *this alone* is the offending diet which has done so much harm. Take, for instance, such birds as Storks, etc., that live on garbage such as decomposing fish and such like, I should think they must eat Bacilli by the million. If I can keep a freshly imported soft-billed bird for a month I consider him safe from enteric, and do not remember losing one after that time. I have used egg in one form or other for years, and have no reason to complain of losses from enteritis, and unless reliable data, drawn from facts, can be produced, I should not for one moment think of abandoning its use. Many are the fanciers, grey and bent with years, men not necessarily scientific, but experienced and observant, who have succeeded in keeping some of the most delicate or soft bills in perfect health for years, and the staple food has been egg. Facts are stubborn things. What greater authority or more successful exhibitor have we than Mr. H. J. Fulljames? Who could bench a bird in better condition? His experience tells us that egg is good, and the "Century Food," his recipe, is composed largely of this ingredient and I have used it with the utmost success, and can strongly recommend others to use it. I am quite willing to run the risk of the attacks of the Bacilli.

That semi-decomposing egg is injurious I am willing to admit, but what other form of animal matter would not be equally injurious if decomposition had commenced.

Many give their soft bills scraped meat. This should be quite fresh. That mealworms given injudiciously are likely to cause serious effects in some birds is beyond dispute, although Dr. Creswell evidently doubts it. The chitinous covering to mealworms is very indigestible to some birds, and will produce swelled feet, fits, and even death in some cases. I do not want to suggest that Dr. Creswell's theory that septic enteritis may be caused by egg food is incorrect, but am of the same opinion. I also think that to imagine that to refrain from the use of egg food will mean a perfect immunity from the disease, is unreasonable and far from having been proved.

Will Dr. Creswell give his opinion as to why enteric (*septic enteritis*) is more common amongst hard billed than soft-billed birds as I have before suggested?

I have the pleasure of knowing a member of our Society who has a Flame-shouldered Marsh-Troupial, fully 15 years old, in perfect health and feather, that has been fed largely on egg food; for 14 out of the 15 years the Bacilli have been endeavouring to destroy him. Unhappy disappointed Bacilli!

And last but not least: Should aviculturists generally survive the shock, it will no doubt have disastrous effects on those whose living depends on the sale of this commodity, which is rather a serious matter. Prove first beyond doubt, and I shall be with many others ready to accept it as fact.

ARTHUR GILL, M.R.C.V.S.

SIR,—I have read the article "On the influence of diet on the Avian Death Rate." My hobby was to find out the length of time that Waxbills and the smallest finches could live in confinement, and in one of the cages I kept between thirty and forty birds. Part of the diet given was "Hofmeier's Preserved Yolk of Egg," and as my birds thrive for nearly nine years before the cat disposed of the lot, I certainly should not cease to give this article of diet—but perhaps Dr. Creswell is writing of fresh eggs, and I have had no experience with this as part of the diet of the smallest foreign finches.

W. T. CATLEUGH.

CAGE-BRED AZTEC CONURES.

SIR,—So far as I can gather—and my opportunities for reference are few—the heading suggests a feat which is not of every-day occurrence. Last year, a cage $3\frac{1}{2}$ ft. wide at front, and sloping to 15 in. at the back, 18 in. high and 2 ft. deep, held seven Aztec Conures (*Conurus aztec*). On the back of the same, and hanging the one over the other, are two H. & P. biscuit tins, cemented in each of which is a half calabash shell. A pair succeeded

in hatching one youngster out of two eggs—it lived for three weeks only. No further attempts at breeding were made in 1902.

In mid-April last, however, intending to carry the birds with me to England, to my surprise and pleasure one of the biscuit-tins contained four eggs. Needless to say the pair of Conures responsible for these had no sea-voyage.

While in England, I learned one egg again had hatched, and, after slow growth at first, the youngster, I find on my return to Jamaica, has made a perfect-conditioned bird not easily recognised from its parents.

A little more than three weeks back, the frequent visits of the birds to their bedroom made me suspicious, and investigation showed another clutch of four eggs which were undergoing incubation; these were as usual white, and a trifle smaller and more obtuse than those of the common Barbary Dove. Of these eggs—despite the shaking caused by a hurricane—two hatched on consecutive days, a third after three days interval, and the last two days later. Thus, so far as appearances go, a further quartette of healthy cage-bred Aztec Conures may be announced.

Soaked Canary seeds seem to be my birds' most useful diet when breeding; very little other food is looked at. The elder brother (presuming it is a male), although well able to slift for himself, still shares the family nursery.

To sum up:—my experience with the Aztec Conure teaches me that it is decidedly interesting, neat, if not gaudy, not very noisy yet easily taught to say a few words—a parrot near by being the instructor. Its appetite is moderate—except when chewing wood comes in; and altogether it is deservedly a favourite.

Because of the birds' little failing for splinters, their cage is lined with wire-netting; and, in explanation of its curious shape, I should add that it is one of eight forming an octagon round a tree-trunk. In a similar cage, opposite the Conures' 'back-door,' it may be stated that a pair of Cockatiels are now incubating their three eggs.

HAROLD E. ATTEWELL.

Kingston, Jamaica; 20th August, 1903.

THE WORRIES OF AVIARIES.

SIR,—I have read Miss Hawke's "Aviary Notes" in the September magazine and her wishing other members would give their aviary experiences, so perhaps my misfortunes in this way may be interesting, even if they shew how disheartening aviaries can be.

I have two small outdoor aviaries in my rather large villa garden, with 40 or so birds in them, but sad to relate I have a tale of woe to tell concerning most of them. Cats are my first and greatest enemies; they

perform acrobatic feats over the wire netting, sit in pairs on the roof mewling duets, making one wake with a start in the small hours to peer through the window, expecting to see the robbers have broken in and final ruin staring you in the face; mice one can catch and bear with martyr-like fortitude, but cats——

Then I bought a very fine pair of Nonpareil Buntings, expecting to breed, but the fates willed otherwise. No sooner did the cock bird see a rather smart little German hen, than he must commence to make fierce love to her, ending in the pair having a nest with four eggs; meanwhile the hen Bunting, deadly jealous, tried to woo the truant back, and pulled the Canary's tail out for a Jezebel, the cock bird retaliating by scalping her, and so died a valuable bird; the most aggravating part of the business being that the Canary deserted the eggs a few days before they were due to hatch out, the young in the shell being well formed.*

My greatly-admired Gouldian hen died on the nest just when my hopes were rising to the highest degree possible, and after telling interested friends I was likely to breed Gouldian Finches in an unheated garden aviary, but alas——! My hen White Java behaved in a similar manner. The Egyptian Quails dashed and tore their heads at night trying to fly to the moon, and died in consequence.

But enough of tragedies! The Zebra Finches are my only consolation; they I find will breed and rear their young without trouble; but even Dr. Butler throws cold water over one, telling me they multiply so quickly as to become a nuisance and interfere with the nesting of more interesting birds—so where must one turn for consolation?

FRANK BATHE.

REARING VIRGINIAN CARDINALS.

SIR,—I believe this has very seldom been successfully accomplished, so I think it may be interesting if I describe the successful rearing of two fine young birds. They were hatched out on 23rd August, and are now—17th September—fully fledged and flying strong. I have had the old birds many years and they have always nested three or four times during the summer, but the young ones—generally three in number—have always disappeared on the third or fourth day after hatching, and I only once found a body with the head bitten off. I have tried giving them an aviary all to themselves, and also taking away the cock, but the result was always the same. This time the hen built a small slight nest in a dead yew tree inside the wooden shelter, and laid three eggs; it was a quiet place except for other birds who crowded the tree, and I feared would disturb her, but she sat very tight, only seeming shy of being looked at. We made up our

* This is especially interesting as proving the truth of Dr. Russ' opinion that it was possible to obtain mules from a Nonpareil and Canary.—A. G. B.

minds that the want of a sufficient supply of insect food was the cause of our failures, so we supplied them with mealworms, caterpillars, centipedes, etc., about six every hour, from 6 a.m. to 6 p.m. for the first week. The birds came very close and asked for food, and a worm or insect was dropped one at a time, and the cock and hen both took them, and fed the young immediately, only taking a circuitous road to the nest to prevent our knowing anything about it. Three were hatched out, but one was not so strong as the others and died in a few days, and I removed the body. The young birds are very tame, and one shows a little red on the wings, and the other has nearly white wings.

Our other nesting successes this year are two broods of Californian Quail, and one of African Quail; the latter laid seven eggs in a hole in the ground, which I protected by placing a chair over it, as it was very wet and rough weather. She hatched three, and one died when a few days old; the other two are now a month old, nearly as big as their parents and delightfully tame playful little things; we reared them chiefly on small earth worms, and a little soft food, bread, etc. I opened the crop of the one that died and found some white millet not cracked, and I thought that might have caused its death, so withheld seed from the others till they were three weeks old. I should say that I shut the mother and chicks up in a coop as the cock seemed likely to illtreat them, and have only just let them out, and the whole family runs about together and seems very happy.

I have also any number of Zebra Finches, and as many nestlings still in two nests; and my Australian Crested Doves have hatched two pairs, and the hen is sitting again. Also Redrumps and Budgerigars have done pretty well, but I should think on the whole it has not been a good nesting year.

M. W. CONNELL.

TREATMENT OF INDIAN ORIOLE.

SIR,—Can you advise me as to the feeding and treatment of an Indian Oriole. I purchased him in the Spring from a dealer. He was then in full plumage but tailless, and the dealer told me "he had removed the stumps of the tail feathers to make them grow again quicker." The tail has *never* come again, though there have been two or three small feathers, which quickly dropped out. The bird has been a long time now in the moult, and is *nearly* bare of feathers under his wings and breast. He is fat and lively but there is not a sign of feathers coming. I feed on a well-known insectivorous food, mealworms and bananas, which is the only fruit the bird will touch. The cage is large and stands in a room with other birds *not* heated. I fancy perhaps the bird needs more heat. He is very fond of bathing. When I first got him he had red mite, but is now free from the pests, as I washed him in quassia water, and now never see a sign of them. He is tame and can be handled.

M. M. HAMILTON.

The following reply has been sent to Mrs. Hamilton :

Your bird, although apparently well, is not so. He is unable to grow feathers owing to the want of those elements necessary for feather production. I should certainly change your food. Try "Century Food" instead of that you are using. I do not wish to detract from the value of the food you are getting, as I know it to be very good, but I have frequently found a change of diet work wonders in such cases. Give a few drops of Parrish's chemical food in the water and keep the bird in a warm room. I shall be glad to hear the results in a fortnight.

ARTHUR GILL.

THE RAIN QUAIL.

[The following account of the nesting of a pair of Rain Quails, *Coturnix coromandelica*, belonging to Miss Appleton, and the rearing of a chick which was hatched under a Bantam, has been forwarded to us by Mr. Archibald Simpson].

Miss Appleton obtained a pair of adult Rain Quails at the beginning of March of the present year, which were turned into an outdoor aviary containing a miscellaneous collection of Waxbills, Finches, Mannikins, Budgerigars and Canaries. The aviary consists of a lean-to shed of the loose-box type, with an outer flight of about 16ft. by 12ft.

Within a fortnight the hen bird made a nest under a heap of dried bracken in the inner portion of the aviary and in due course nine eggs were deposited. These she deserted, as a result I am afraid of a natural desire on the part of the owner to satisfy her curiosity as to how matters were progressing. Within a day or two the bird laid again, this time in a hollow in the sand about one foot away from the first nest, and again she deposited nine eggs, which she promptly deserted on being disturbed. Within another week she had formed another nest in the outside flight, under a heap of willow shavings which had been thrown down to furnish nesting material for the smaller birds, and her faith in the "power of nine" being still unshaken, she again laid this number of eggs.

In the meantime Miss Appleton had procured a broody Bantam, under which she placed the first two clutches in the hope that some of them would hatch out; but at the end of three weeks there was no result. It was then decided to transfer the third batch to the Bantam, and the result was that two chicks were hatched on or about the 18th June, one of which died on the 24th; and the other is now a strong healthy bird almost the size of the mother. Meanwhile this prolific bird had laid fourteen more eggs in the last nest, which Miss Appleton kindly sent to the writer, who requisitioned the services of a foster-mother without success.

I have only to add that, some few days before the last egg was laid, the cock Quail managed to escape into the open country, and has not since been seen. I strongly suspect he resented the manner in which his wife

carried out her domestic arrangements, and resolved to leave home at the first opportunity as a protest.

AURORA FINCHES NESTING.

SIR,—What would you consider the best food for Aurora Finches to rear their young upon? I have a hen sitting. She hatched a brood of four or five, but, I am afraid, has not brought them up, though at times I think the cock feeds them. I cannot get at the nest though it is in a cage. When the hen sat on her first lot of eggs I had a supply of fresh ants' eggs from Germany, which both birds ate very greedily, and since then I have always put in small mealworms and a little "Century food," as well as small cabbage caterpillars, which however were never plentiful, and the usual seeds.

J. MOERSCHELL.

The following reply has been sent to Mr. Moerschell.

I should think your treatment of the Aurora-finches could hardly be improved upon: and, as Dr. Russ, who successfully bred the species, has not told us what food he prepared for the young; there is no means of knowing whether he treated them differently from his other Ornamental Finches when breeding.

One thing you do not mention which is generally useful—grass in seed plucked in the fields and hedgerows.

A. G. BUTLER.

PECTORAL RAILS.

SIR,—I have had in my aviary for from two to five months a variety of birds, among others two Pectoral Rails, St. Helena Waxbills, White Bellies, Grey Java Sparrows, all living together in apparent friendliness, but about ten days ago we discovered the Pectoral Rails devouring the body of a St. Helena Waxbill, which was still quite warm, and which they had evidently killed. Since then they have killed and eaten a Java Sparrow and a White-belly. I shall be glad to know if Pectoral Rails are generally found to be dangerous to other birds, as it is curious that I should have had them so long without their doing any damage. I have fed them on bread-crumbs, a mixture of different sorts of grass, and sometimes barley meal, and they have also eaten the millet and canary seed put for the other birds.

Lately I have also given them mealworms, which they much delight in. Would the mealworms give the Rails a taste for animal food?

LOUISA FEILDING.

The following reply was sent to the Lady Louisa Feilding:

I have never kept the Pectoral Rail, but have had several other species which I have always found harmless among other smaller birds.

The Rails are, however, largely if not entirely insectivorous, and it is probably lack of animal food which has developed this tendency to cannibalism.

Apart from a few mixed seeds, I give mine hard-boiled eggs, ants' eggs in equal parts and a little scraped raw meat.

I would suggest giving yours scraped raw meat and hard-boiled eggs and stopping the mealworms, which, I am afraid, acting as a stimulant, may have been the inciting cause.

Cannibal propensities, however, once acquired, are difficult to eradicate, and should they still continue to prey on the smaller birds I fear the only remedy will be to place them in an aviary by themselves.

J. LEWIS BONHOTE.

[We found this species dangerous with very small birds. It is very fond of scraped raw meat, also cockroaches and other insects.—ED.]

RARE FOREIGN BIRDS.

It is important that a record should be kept of the arrival of rare importations of foreign birds into this country, and the Editor will be very pleased to receive communications from members who have received anything of especial rarity. Several interesting birds have recently reached this country, which have seldom been imported before; among them we may note several examples of the Red-collared Lorikeet (*Trichoglossus rubritorques*) and Brown's Parrakeet, from Australia, while the formerly rare *Bathilda ruficauda* has been imported in immense numbers. South American birds have been brought home somewhat freely, and one consignment contained the rare Orange-billed Tanager (*Saltator aurantiirostris*), the small Brown-throated Cardinal (*Paroaria cervicalis*) and the interesting Oven-bird (*Furnarius rufus*).

From India, our member Mr. E. W. Harper has lately brought the Gold-fronted Finch (*Metoponia pusilla*), the Grey-winged Ouzel (*Merula bouboul*) and the Great India Weaver (*Ploceus megarynchus*).

THE EXECUTIVE COMMITTEE.

Messrs. Bonhote and Meade-Waldo have been elected by the members of the Council to represent them on the Executive Committee by a large majority, the other candidates being Messrs. Farrar, Finn, and Page.

THE SOCIETY'S MEDAL.

The Society's Medal has been awarded (September Number, pp. 366 and 377) to Mr. Leslie Seth-Smith, for having bred the Rain Quail, *Coturnix coromandelica*.

An account of an egg of a Rain Quail belonging to Miss Appleton having previously been hatched under, and the young Quail reared by, a Bantam is now published. The Members of the Executive Committee are unanimous in their opinion that the Society's Medal should not be awarded for a bird bred under such conditions; and it goes to Mr. Leslie Seth-Smith accordingly.

The Society's Medal has been awarded to Mr. St. Quintin, for having bred and fully reared three young of the Ruff and Reeve, *Pavoncella pugnax* (October Number, p. 400).

It is with extreme regret that the Executive find themselves barred from awarding a Medal to the same gentleman for having bred two examples of the Demoiselle Crane, *Anthropoides virgo* (October Number, pp. 390 and 408). It has been pointed out that in a curious old work in the Zoological Society's Library entitled *Portraits of Rare and Curious Birds, with their descriptions, from the Menagery of Osterly Park in the County of Middlesex*, by "W. Hayes and family," and dated 1794, the Demoiselle Crane is figured in colours, and it is stated in the text (page 4) that "The subject of this plate, with several others, were hatched and reared in the Osterly Menagery." Nevertheless Mr. St. Quintin has the credit for being the only person of the present generation who has succeeded in breeding and fully rearing this interesting species.

ELECTION OF COUNCIL, 1903.

RESULT OF THE VOTING.

		SUCCESSFUL.				
		Number of votes recorded.	|	Number of votes recorded.		
Mr. J. L. Bonhote	88	|	Captain Shelley ..	..	59
Mr. E. G. B. Meade-Waldo..	..	85	|	Rev. F. L. Blathwayt ..	..	48
Miss R. Alderson	82	|	Dr. W. G. Creswell ..	..	46
Mr. F. Finn	73	|	Mr. R. Humphrys ..	..	45
Mr. O. E. Cresswell	68	|	Rev. C. D. Farrar ..	..	43
Mr. A. Gill	64	|	Mr. W. T. Page ..	..	41
		UNSUCCESSFUL.				
Mr. W. H. Workman	39	|	Mr. H. Scherren ..	..	31
Mr. T. H. Newman	36	|	Mr. B. C. Thomasset ..	..	30
Mr. J. Sergeant	34	|	Mrs. Anningson ..	..	17
Mr. P. W. Farmborough	32				

Total number of voting papers received, 98.

(One voting paper unsigned—spoilt.)

Total number of votes recorded, 961.

H. W. MATHIAS, *Scrutineer*, 16/10/03.

POST MORTEM EXAMINATIONS.

RULES.

Each bird must be forwarded, as soon after death as possible, carefully packed and postage paid, direct to Mr. ARTHUR GILL, M.R.C.V.S., Veterinary Establishment, Bexley Heath, Kent, and must be accompanied by a letter containing the fullest particulars of the case. Domestic poultry, pigeons, and Canaries cannot be dealt with. No replies can be sent by post.

BULLFINCH. (The Countess of Harewood). Handreared. [It was much emaciated and very anæmic. The strain of moult no doubt was too great for it; this was followed by an inability to assimilate food, and, although it fed, it practically starved. Parrish's Food, in the early stages, given in the drinking water, might have saved it].

BULBUL, SUPERB TANAGER. (Mrs. Noble). [The Bulbul died of congestion of the lungs. In all probability it was freshly imported and contracted a chill. I am no advocate for keeping birds in a warm humid atmosphere, such as one gets in a conservatory. The Tanager died of acute inflammation of the bowels].

LAVENDER FINCH. (The Hon. M. C. Hawke). [You give no particulars. The cause of death was apoplexy. It was a cock].

PINTAIL NONPAREIL. (Mr. B. Mason). [It died of broncho-pneumonia, Parrish's Food was no good to him, but the glycerine might to a certain extent relieve him. Some people ridicule medicaments in birds' drinking water, but this is because they do not understand the management and treatment of the lower animals. To give a bird medicine, fill the drinking vessel to a certain mark; note carefully the amount that the bird takes on two or three consecutive days; then add the medicine in a proportion that will give the required dose in the average quantity consumed, and, if the bird drinks more freely than usual, remove the drinking vessel periodically, but if it does not drink so freely increase the medicine in proportion. To catch up and administer medicine to a nervous bird (for most birds fear being handled) is courting disaster].

ROSELLA PARRAKEET. (Miss Willatt). [Died as a result of a ruptured blood vessel on the brain. This was not sufficient to kill immediately. The inability to fly was consequent on the pressure caused by the clot of blood on the brain. It was a cock].

GREY PARROT. (Rev. J. C. B. Fletcher). [Acute enteritis was cause of death. Nothing could have been done to save it].

BRONZE MANNIKIN. (Mrs. Robertson). [Death was caused by concussion of brain, and was possibly caused by flying against some obstacle in an attempt to escape his persecutor].

PARSON FINCH, hen. (The Hon. Mrs. Carpenter). [Bird died of pneumonia. It was undoubtedly caused by chill].

BLACK-HEADED NUN. (Mrs. Robertson). [Your bird died of dysentery. All unnatural evacuations are deleterious and likely to produce disease and even death in other birds which may partake of food tainted with such. It is a difficult thing to explain the germ theory of disease in language easily understood by those who have not studied it, and, as I always endeavour to make the result of my examinations as clear as possible to the members of our Society, I am sure you will excuse me going farther with detail, but I should certainly advise all such cases to be at once isolated. This is a contagious disease, and I would certainly disinfect cage, etc. that the bird has used].

COCK CORDON BLEU. (Capt. Horsbrugh). [Apoplexy].

MADAGASCAR LOVEBIRD. (Miss Hamilton). [Bronchitis].

BUDGERIGAR. (Mr. Archibald Simpson). [I have been consulted on several occasions as regards Budgerigars dying in numbers in other breeders' aviaries. If you will catch up all your young birds about ten to twelve weeks old, you will find many inordinately fat whilst others are emaciated. I find from experience this is a very critical period in the Budgerigar's life: hence the low price of young birds. When I go over mine, they are the yellow variety, I separate the thin from the fat ones. The fat ones I feed chiefly on canary seed, whilst the thin ones get canary, millet, and hemp, and by this means I lose very few. Your bird died of apoplexy. Am glad to hear your birds had no soft food, as this is quite unnecessary].

WHITE JACKDAW. (Lady Lilford). [Pneumonia was cause of death, and I am afraid the bird has been ill longer than you anticipate].

CORDON BLEU, cock. (Mrs. Noble). [It had a large blood clot on the brain, from a ruptured blood vessel. Should you have any more birds die, send them on to me, as I shall be only too pleased to assist you. Many of the more delicate Waxbills die about this time of the year, especially when the weather is bad].

BUDGERIGAR, cock. (Miss Tate). [Died of pneumonia; it was an immature cock bird].

PEKIN ROBIN. (Mr. Moerschell). [Pneumonia].

I regret that two or three cases, including one from Mrs. Noble and one from Mr. Rothera, had to be destroyed, owing to my having met with an accident which incapacitated me for several days, but I am now able to attend to my duties.

ARTHUR GILL.

Cloth, gilt top, Small 8vo., Six Shillings net.

THE
BIRDS OF TENNYSON,

BY
WATKIN WATKINS, B.A.CANTAB.

Member of the British Ornithologists' Union.

"Many as are the volumes which have been written on different phases and aspects of our late Laureate's works, this, we think, is the first time that a whole book has been devoted to "The Birds of Tennyson." Mr. W. Watkins, the author, is a member of the British Ornithologists' Union, and has, therefore, a scientific as well as a literary interest in the subject. And his verdict in the matter is this—that 'No poet is so satisfactory to the ornithologist [as Tennyson], for no poet had a more accurate knowledge of birds or had a happier power of describing their peculiarities.' Mr. Watkins' pages are, indeed, themselves a testimony to the acuteness as well as the frequency with which Tennyson described the 'feathered tribe.' All this, of course, is an old story to the students of the poet, but it is pleasant to find Tennyson's references to birds collected and systematised as they are in this agreeable treatise, which is, as it should be, carefully and usefully indexed. In his introduction Mr. Watkins deals with Tennyson's allusions to birds in general, and in subsequent chapters discourses successively of birds of song, birds of passage, birds of prey, birds of sport and so forth. The result should convince those who are not already convinced that as a poet of the birds Tennyson ranks with Shakespeare. Mr. Watkins, as a naturalist, of course appreciates fully the poet's stanzas on 'The Thrush,' of which the ignorant have been accustomed to make game. He recognises the fidelity with which the bird's 'note' is reflected in such lines, homely enough, as—

'Summer is coming, summer is coming,
I know it, I know it, I know it.'

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(Continued on next page)

III.

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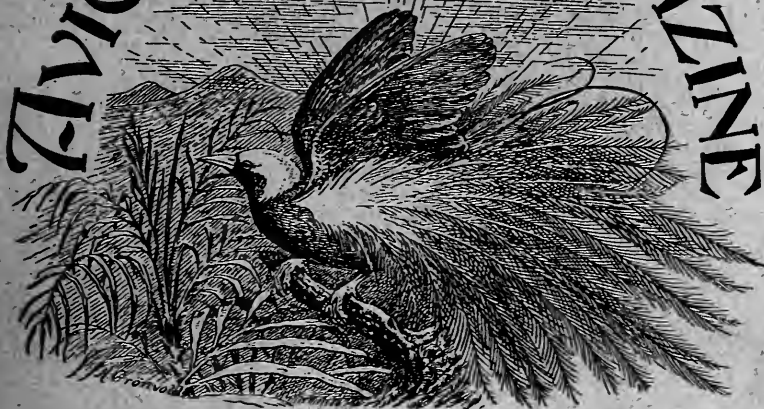
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THE JOURNAL OF THE AVICULTURAL SOCIETY.

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(Continued on page iii. of cover)

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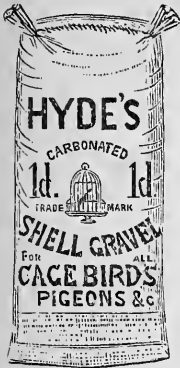
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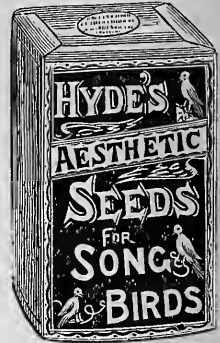
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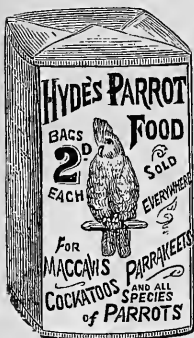
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WHITE - THROATED THICKHEAD.

Pachycephala gutturalis.

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BEING THE JOURNAL OF THE

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New Series.—VOL. II.—No. 2.—All rights reserved.

DECEMBER, 1903.

THE WHITE-THROATED THICKHEAD.

Pachycephala gutturalis.

Through the kindness of our member Mr. Norman B. Roberts, we are enabled to present to our readers an illustration of this fine Australian species.

Dr. Sharpe enumerates no less than eighty-eight species of the genus *Pachycephala* in his "Hand List," some fifteen only of which occur on the mainland of Australia, the rest being distributed over the surrounding islands.

Writing of this genus, Gould remarks:—"Their habits differ from those of most other insectivorous birds, particularly in their quiet mode of hopping about and traversing the branches of the trees in search of insects and their larvæ: caterpillars constitute a great portion of their food; but coleoptera and other insects are not rejected."

In forwarding us the accompanying picture, Mr. Roberts writes: "I am sending you herewith a drawing of the White-throated Thickhead, *Pachycephala gutturalis*. It is not a rare bird, but one, I believe, which has never yet been imported to this country. There is however no reason why it should not be as easily kept as many other birds of a similar nature.

"It has much to recommend it, being strikingly handsome, lively, and the possessor of a very melodious voice.

"It is closely related to the Shrikes, and is a first cousin of the so-called Yellow-breasted "Robin," which has been brought

over to this country from Australia during the last few years. It inhabits the same country as this "Robin," and could be quite as readily obtained. The specimens from which the drawing has been made came from the banks of the River Murray, in New South Wales. These birds are quite numerous in that locality, as also are their near relatives the Rufous-breasted Thickheads (*P. rufiventris*). In the latter species the cock has the yellow of the underparts replaced by a beautiful chestnut, and the green of the back, wings and tail, by slate grey, whilst the black and white of the head and throat remain unchanged. The females of the two species are almost alike."

The White-throated Thickhead is found throughout Eastern and South Australia and in Tasmania. Gould writes:—"It is rather abundantly dispersed over the forests of *Eucalypti* and the belts of *Acacia*, among the flowering branches of which latter trees the male displays himself to the greatest advantage, and shows off his rich yellow breast as if desirous of outvieing the beautiful blossoms with which he is surrounded.

"The stomach is very muscular, and the principal food consists of insects of various genera, which are sought for and captured both among the flowers and leaves as well as on the ground.

"It is generally met with in pairs, and the males are more shy than the females. It flies in short and sudden starts, and seldom mounts far above the tops of the trees.

"The voice of the male is a single note, seven or eight times repeated, and terminating with a sharp higher note much resembling the smack of a whip."

Mr. A. J. Campbell, in his splendid work, tells us that the nest is cup-shaped, and "composed chiefly of shreds of bark and fine dark-coloured twigs, neatly lined inside with finer twigs, rootlets, and sometimes portions of fine grass, and placed usually a few feet from the ground in a thick bush in a gulley, or in a scrub near a stream. Dimensions over all, about 5 inches by $2\frac{1}{2}$ inches in depth; egg cavity, $2\frac{1}{2}$ inches across by $1\frac{1}{4}$ inches deep."

The eggs, according to the same authority, are "oval in

shape, occasionally roundish oval; texture of shell fine, with a glossy surface; colour, yellowish-white, speckled particularly about the upper quarter with spots of dark brown or amber, intermingled with duller markings which appear as if beneath the surface of the shell." A clutch consists of two or three eggs.

Apparently this species occasionally breeds before the males have attained their full plumage, as the following note, also from Mr. Campbell's book, shows:—"One nest I noticed at Dandenong Creek, near Bayswater, 22nd October, 1898, containing a pretty set of three eggs, which were 'shepherded' by a pair of birds both in grey plumage. This prompted my curiosity, not to mention the sweet solicitous notes of the birds, so I left the home untouched. On visiting the locality about a fortnight afterwards, the same pair of birds were seen in charge, therefore it is evident that the male birds of this *Pachycephala* occasionally breed before they attain their beautiful yellow breasts and pale white throats."

In these days, when aviculturists think nothing of keeping the most delicate species of insectivorous birds in captivity, there is no reason why the handsome Thickheads should not be kept, and let us hope that some enterprising importer will give us an opportunity of studying them alive in our aviaries.

D. S.-S.

THE SMALLER RED-HEADED CARDINALS.

Paroaria capitata and *P. cervicalis*.

By ARTHUR G. BUTLER, Ph.D.

When I imported an example of *P. capitata* in 1893 the late Mr. Abrahams informed me that it was the Yellow-billed or Brown-throated Cardinal, that it was an extremely rare bird and worth about £3; indeed he assured me that he should have no difficulty in obtaining that price for so good a specimen.

In 1873, as Mr. Wiener informs us, the Zoological Gardens purchased a pair of these Cardinals, which about that time were imported now and then, "but have lately disappeared again

from the market." That statement was published many years ago, how many I cannot say definitely, as the book is undated; but I should think about twenty-two years in all probability.

The very similar *P. cervicalis* to which, as I pointed out in my "Foreign Finches in Captivity," the name Brown-throated was better suited than to *P. capitata*, appears never to have been recognised as being imported until the present year; when our Member, Mr. James Housden, was fortunate enough to secure a fairly large consignment, from which I obtained two pairs.

At the recent 'London and Provincial Ornithological Society's' Show at the Crystal Palace, Mr. Housden exhibited a pair, and Mr. Storey (I think) a third example of this species, to which, however, Mr. Swaysland awarded no prize; as, he told me, the species used to be imported as freely as the Common Pope, and he considered the plumage of the exhibited specimens very inferior to that of a Pope-Cardinal on the same bench.

As there is no record either in Dr. Russ' very complete work—'Die fremdländischen Stubenvögel,' or in any of the published Zoological Society lists, of the importation at any time of *P. cervicalis*; and as it is impossible, if it were ever imported as freely as *P. larvata*, that it could have failed to reach any of the European Zoological Gardens, and so find a place in Dr. Russ' work; one can only explain Mr. Swaysland's statement by that very natural peculiarity of human memory which tends to exaggerate facts with the passage of years, and by the second fact that somewhere between the year 1873 and perhaps 1878 a certain number of the very similar *P. capitata* was being imported.

That these two supposed species were not recognised as distinct by dealers, is evident from Mr. Abrahams' observation that my bird was "the Yellow-billed or Brown-throated Cardinal," and that such a keen observer of the slightest colour differences as Mr. Abrahams was, should not have distinguished two related birds so large as these Cardinals, is I think sufficient to make us carefully examine into the characters upon which they have been separated.

It must be borne in mind that when the twelfth volume

o the British Museum Catalogue of Birds was published, there were only two skins of *P. capitata* and two skins of *P. cervicalis* in the collection. The specific differences in the key amount to this, that *P. capitata* is said to have no black on the upper mandible and the legs yellow; whereas *P. cervicalis* is said to have the upper mandible black and the legs blackish.

Now, in the first place the legs of *P. capitata* when living, are flesh-pink, and the yellow which appears in the legs after death is due to natural discoloration; in the second place the legs of *P. cervicalis* are also flesh-pink in life and only the younger birds show any appreciable quantity of leaden grey on the front, whilst the amount of this colouring varies considerably in individuals.

In the second place the blacking of the upper mandible, as shown in the plate of the Museum Catalogue, only extends from the tip along the culmen and tomium. In one of my four examples this blackening has disappeared from the beak with the exception perhaps of a faint line along the culmen (which doubtless will disappear later) whilst it varies in extent in all four specimens.

When characters usually associated with youth are not only seen to be extremely variable in individuals but to disappear with advanced age; what is one to do? But there is another point—*P. capitata* has a black throat, whereas *P. cervicalis* has the throat brown with reddish bases to the feathers: that looks like a good character; only my most advanced bird, in addition to its almost perfectly yellow bill and flesh-pink legs, has acquired a black throat.

I am afraid, therefore, that the supposed adults of *P. cervicalis* are actually *P. capitata* in imperfectly matured colouring, and that the young male of *P. capitata* in the Museum is a variation in which the blackening of the beak and legs has not been developed, or else has been lost before the head and throat have acquired their adult colouring.

If it is possible, as Dr. Sharpe suggests, that *P. cervicalis* may merge into *P. gularis*, although the illustration in the

Catalogue shows several marked differences; surely one may wonder where one shall look for satisfactory characters whereby to separate the Brown-throated from the Yellow-billed Cardinal.

BREEDING OF THE ROCK PEBBLER PARRAKEET.

Polytelis melanura.

By Mrs. JOHNSTONE.

The Black-tailed or Rock Pebbler* Parrakeet is not very commonly known, although I expect it is familiar to the greater number of aviculturists by coloured plates, or perhaps by personal experience in their aviaries. Mr. Campbell tells us it is a common species in South Australia, its native home, and that it is generally to be met with in the interior provinces or the vicinity of permanent water.

The cock is most lovely, and for those who are unacquainted with this species I add a short description:—

The head, breast, rump, upper and under wing coverts are bright canary yellow, back greeny yellow, a bar of soft bright rose colour across the centre of the wings; flight and tail feathers dark navy blue and black, beak deep rose colour. In my bird the tail feathers are very long, the centre one measuring ten inches, the whole bird nineteen inches. They are exceedingly gentle, and I have never seen any of mine in the least disagreeable to the others. They could, I am sure, be trusted with any bird, however small and pugnacious. The hens are good layers and sitters: both my hens, before I obtained a cock, laid five eggs and sat the usual time. I did not take them as one hen at least had paired with a Pennant Parrakeet. They would be very useful, I am sure, to place eggs under when the rightful owners declined to sit; they seem so anxious to nest, and I only regret that I was not able to obtain more than one cock. Mr. Campbell, in his *Nests and Eggs of Australian Birds*, says:—

* This species is a frequenter of rocks and pebbles bordering rivers, commonly breeding in the cliffs; and I am very glad to see that Mrs. Johnstone gives the correct, instead of the corrupt and meaningless spelling of the familiar name generally used in this country.—R. P.

“Mr. W. White, Reedbeds (South Australia), whose roomy aviary contains many beautiful Parrots, has a handsome Black-tailed Parrakeet which has reared several clutches of young Cockatoo Parrakeets. As soon as they were hatched by their proper parents they were handed over (evidently by mutual consent) to the Polytelis.”

My pair commenced nesting early in April, and what I noticed very particularly was the very quiet way they set about it. There was none of the screaming and fighting which Rosellas, Pennants, and Barnards invariably indulge in (unless they are separately housed), but the hen quietly slipped into an unoccupied tree-hole, the same tree by-the-by the Leadbeater Cockatoos had previously reared their family in, and there she remained, sitting very closely, and totally ignoring the frequent efforts of the Pennants and Rosellas to displace her.

The eggs (five) are very similar to other Parrakeets' eggs, round and pure white.

The young were hatched in the usual time, but remained a good deal longer in the nest than the Barnards or Rosellas, a week or ten days at least; and for some days before they flew their little soft heads were constantly to be seen at their window, until one, anxious to see more of the fascinations of the world, fell or was pushed out, and lay frightened and helpless on the grass. He was quite unable to fly or even perch, and crawled away to some logs to find a safe hiding place. The remaining two tumbled out—I cannot say flew—two days later, and for some days were equally helpless.

And now comes the weak point in my pretty birds' character; the hen, although a good nester and sitter, was not an *energetic* mother; the cock totally ignored the entire family, with the result that two out of the three young birds died.

In a small aviary this would probably not have happened; my aviaries are large; it would take a certain amount of exertion on the part of the parents to find and feed three youngsters who were themselves incapable of running after the old birds; added to which the nights were cold and the days very wet; and so, being unable to fly, they caught a chill and quickly succumbed.

One of the youngsters that died was an undoubted cock, the other a hen; the remaining one I try to think is a cock; he is a dark yellow-green bird and has bright under wing coverts, which seems hopeful.

I was glad when the young bird was seen at the seed trough, as his plaintive demands for food were most distressing, the old hen feeding only occasionally. The cock never at any time took any interest in the young ones; he sat as if stone deaf, and took no notice of the hungry baby, who got as near him as possible and begged for food. He generally shuffled off, and evidently thought his family a great nuisance. I am glad to say the survivor was strong-minded enough to take the matter into his own hands, and is now quite capable of fighting his own battles.

I must add that these birds are quite hardy, and will winter well in a cold house. Mine have never been in a heated aviary and are in beautiful condition, unlike the handsome King Parrot which, unless kept warm in the winter, is very apt to go into a decline.

[NOTE:—Mrs. Johnstone's birds commenced to sit *about* May 1, and the young were first heard on June 3. The first young bird left the nest on July 12, and was followed by the others two days later.]

It has been indirectly notified to us (on September 9—some two months later than required by the Medal Rules) that a pair of Rock Peblers belonging to the Rev. B. Hemsworth nested on the ground (of their aviary?), and laid two eggs, one of which was hatched on May 4. The young one, a female, is stated to have been fully reared and to be doing well, and is perhaps the first that has been bred in the United Kingdom.

No account of the case, however, has come to hand, neither has any communication been received from Mr. Hemsworth; and the Honorary Secretary's letter of inquiry remains unanswered. The Society, therefore, is debarred from considering the case in connection with the Medal.]

RARE FOREIGN BIRDS AT THE CRYSTAL
PALACE.

The recent bird-show at the Crystal Palace, although by no means remarkable for the number of exhibits in the foreign classes, contained a few birds which were of very great interest, some of these being the first of their kind to appear on the show-bench. It is not easy to say positively which was the rarest bird. Mr. Hawkins' *Lagonosticta niveiguttata* (a species we hope soon to figure in this journal), and Dr. Hopkinson's *L. rufopicta* are two rare and beautiful Firefinches, the former being especially worthy of the attention of aviculturists. The Great Indian Weaver (*Ploceus megarhynchus*, Hume), shown by Mr. Theobald, is probably the first of its species to appear at a bird-show, although several specimens were on view at Earl's Court during the summer of 1902. It appears that only some twenty specimens of this large form have been recorded alive or dead.

Amongst the Parrots, the most notable, so far as rarity was concerned, was Mrs. Johnstone's specimen of *Tanygnathus everetti*, catalogued as "Violet-backed Parrot." I believe this to be absolutely the first and only specimen of this species that has ever reached this country alive.

The Red-collared Lorikeets (*Trichoglossus rubritorques*) shown by Mr. Hamlyn belonged to the second consignment of this fine species to reach this country. They were in very rough plumage. Mr. L. W. Hawkins is to be congratulated on his very perfect pair (the best we have seen) of Varied Lorikeets (*Ptilosclera*). Their lovely condition speaks well for the suitability of the food he gives them, which consists of honey and fruit for the most part.

Dr. H. Lister's beautiful specimen of the Banksian Cockatoo (*Calyptorhynchus banksi*) was perhaps the most striking bird in the show; we do not remember to have seen one of its kind at the Palace before.

Mr. Housden exhibited a pair of the Brown-throated

Cardinal (*Paroaria cervicalis*), and Messrs. Thwaites and Lloyd sent a very nice specimen of the Crested Himalayan Bunting (*Melophus melanicterus*), a well-known species, but one that we never remember to have seen on the show-bench before.

The class for Tanagers contained several gems. Mr. Frostick sent an absolutely perfect specimen of the shrike-like Magpie Tanager (*Cissopis leveriana*) and another which looked like *Tanagra palmarum*, Mr. Housden the rare Yellow-billed Tanager (*Saltator aurantiirostris*), and Mr. Townsend a Tricolor (*Calliste tricolor*) and a Yellow Tanager (*C. flava*). A very perfect Blue Sugar-bird (*Dacnis cayana*) was shown by Mr. J. A. Swan.

Mr. Russell Humphrys' magnificent Rufous-bellied Niltava Flycatcher (figured in our last number) was quite perfect; and it would be hard to imagine a more beautiful bird.

Amongst other birds, less noteworthy than the above, but still of some rarity, may be mentioned Brown's Parrakeet (*Platycercus browni*), the Tui Parrakeet (*Brotogerys tui*), Yellow-Sparrow (*Passer luteus*), Rufous-tailed Grassfinch (*Bathilda ruficauda*), Red-faced Finch (*Zonogastris melba*), Wiener's Waxbill (*Pytelia afra*), Black-rumped Bicheno Finch (*Stictoptera annulosa*), Parrot-finch (*Erythrura psittacea*), Pintail-Nonpareil (*E. prasina*), Desert Trumpeter Bullfinch (*Erythrospiza githaginea*), Blue-winged Chloropsis (*Chloropsis hardwickii*), Superb Tanager (*Calliste fastuosa*), Andaman Starling (*Poliopsar andamanensis*), Red-headed Haugnest (*Amblyrhynchus holosericeus*), Aracari (*Pteroglossus torquatus*), and Yellow-backed Whydah (*Coliopasser macrurus*).

It is not the intention of the present writer to criticise the judging, except to remark that most of the rarest exhibits were absolutely ignored, and in one or two cases the leading awards were bestowed on quite common and comparatively worthless birds.

D. S.-S.

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

By FRANK FINN, B.A., F.Z.S.

So far as we have gone in the present year there has been a fair number of species added for the first time to the Regent's Park collection, as follows :

JAN. 15th.	1	American Golden Plover, <i>Charadrius dominicus</i> .	Captured at sea between Australia and New Caledonia.
MAY 8th.	2	Ross's Snow-Geese, <i>Chen rossii</i> .	.. Arctic America.
APL. 25th.	5	South African Kestrels, <i>Tinnunculus rupicolus</i> .	South Africa.
„	1	Large African Kestrel, <i>Tinnunculus rupicoloides</i> .	„
APL. 27th.	3	Grey-breasted Bullfinches, <i>Pyrhula griseiventris</i> .	Japan.
„	1	Long-tailed Rose-finch, <i>Uragus lepidus</i> .	.. China.
JUNE 29th.	3	Whistling Swans, <i>Cygnus columbianus</i> .	.. N. America.
JULY 23rd.	1	Sclater's Crowned Pigeon, <i>Goura sclateri</i> ..	New Guinea.
JULY 25th.	1	Himalayan Whistling-Thrush, <i>Myiophoneus temmincki</i> .	India.
„	1	Lesser Blue-winged Pitta, <i>Pitta cyanoptera</i> .	„
SEPT. 7th.	1	Winking-Owl, <i>Ninox connivens</i> .	.. N. Queensland.
SEPT. 26th.	2	Gold-fronted Finches, <i>Metoponia pusilla</i> ..	Kashmir.
„	1	Thrush, gen. and sp. inc. (the female of some <i>Merula</i> , F. F.)	„
OCT. 17th.	2	Scoreby's Gulls, <i>Leucophaeus scoresbii</i> .	.. Southern Chili.
OCT. 27th.	1	Christmas Island Dove, <i>Chalcophaps natalis</i> .	Christmas I.
„	2	Wharton's Fruit-Pigeons, <i>Carpophaga whartoni</i> .	„

Owing largely, no doubt, to the wretched weather we have had this year, the breeding-results have been very poor, but the following birds have been bred :

APL. 17th.	2	Black Swans, <i>Cygnus atratus</i> .
JUNE 16th.	1	Brush-Turkey <i>Talegalla lathamii</i> .
OCT. 1st.	4	Jameson's Gulls, <i>Larus novæ-hollandiæ</i> .
„	1	Black-headed Gull, <i>Larus ridibundus</i> .
„	2	White Ibises, <i>Eudocimus albus</i> .
OCT. 19th.	1	Glossy Ibis, <i>Plegadis falcinellus</i> .
OCT. 31st.	6	Black Swans, <i>Cygnus atratus</i> .

A NATURALIST'S RAMBLE IN ALGERIA.

By W. H. WORKMAN, M.B.O.U.

We left Paris by the morning train on the 19th January, 1903. The only birds seen on the journey down to Marseilles were great numbers of Magpies in the fields about the railway.

Leaving Marseilles about one o'clock we steamed through large flocks of what were, so far as I could judge, Common Guillemots; after that my attention for the best part of the twenty-six hours voyage was fully taken up with the rolling of the ship, all the same I noticed a good many Lesser Black-backed and Black-headed Gulls flying round. When about five miles from Algiers, a small brown bird flew round the ship, which may have been blown out to sea.

Next morning was beautifully sunny, so I went out to see something of the birds which could be heard chirping from my bedroom window. The Common House-sparrow was, of course, in evidence but I thought he looked cleaner and brighter than his British relative. Every now and then a pretty little Warbler, probably of the Wood or Garden species, would fly down to the long flower spikes of *Montbretia*, and peck off a few of the insects inhabiting the flame-coloured flowers, which, by the way, in this fertile land grows to a height of seven feet, whereas at home it does not reach much over two. Some old olive trees, well covered with ivy, were the home of a large colony of Blackcaps; such pretty little birds, rare with us in the North of Ireland, they were here to be seen flying in and out and fighting all day long. Behind the hotel was a rather badly-kept vineyard which had great attractions for those butterfly-like birds the Goldfinches, as Mr. Gurney, in his *Rambles of a Naturalist*, very aptly styles them. They were always to be found feeding in large flocks on the seed-plants along with Greenfinches, larger and brighter in colouring than our species; Linnets, Algerian Chaffinches, Serin-finches, Starlings, Blackbirds, Thrushes, Wrens, and Wagtails. At the market I noticed Barbary Partridges, Quails, Woodcock, Snipe, Pheasants, Woodpigeons, Green and Golden Plover, Teal, Larks, Thrushes, and Blackbirds. In the Rue Constantine there is a fairly good

taxidermist's shop where I got three skins made from birds I bought in the flesh. They were Barbary Partridges, Barn Owl, and Kestrel. They cost about two francs each: very different from the prices one would pay in England, and the work was neatly done too. In the shop I saw a Gallinule, Booted Eagle, Hoopoe, Nightjar, Bee-eater, and Jay, also some Bitterns and Cranes. I bought a Black-winged Kite, set up as if killing a Bee-eater, for seven francs.

On the 3rd of March we reached Bougie, a pretty little seaport with some splendid cliff scenery not far from the hotel. Here we first saw Egyptian Vultures feeding on a large rubbish heap close to the sea.

These particular birds did not strike me as being so repulsive as one is generally made to believe Vultures are. With the aid of my glass I had a splendid view, although I could not get so near as some Arabs who were working in the rubbish heap close to them: when I tried to approach they all rose, some going to the trees, others circling round and flying off towards the mountains. Round the splendid cliffs near Cap Carbon, which are about 1000 feet high, I often saw a pair of the larger Hawks circling; Ravens too were plentiful. One day, down near the sea, I had the pleasure of watching for some time the movements of a Rock Thrush as it ran over the rocks.

Mammals were scarce; one day I saw a mongoose quietly trotting across the road. Porcupines are said to be common in the scrub; a skin of one hung in the salon of the hotel, said to have been killed near Bougie. Their quills were used for taking snails from their shells at lunch: a first rate tip for those who like snails.

On the way to Biskra we passed through a great variety of country; near the sea one notices rich red soil, then the railway mounts up into small pine forests; finally, after passing through great grass plains, it enters the great Sahara desert close to Biskra. Large numbers of Storks were seen close to the line; they have their nests on the trees, and when one gets away from the tree country they build on the farm houses, sometimes two on one roof. On one of the salt lakes we noticed

a large flock of Black and White Ducks, but they were not close enough for us to make out the species; small waders were running about the shore, and farther on we passed a flock of Cranes running away from the train.

Between El Querra and Biskra we passed large Hawks, probably Buzzards, quartering the fields. At Biskra birds were scarce; I noted a Harrier, Swallows, Blackbirds, Sparrows, and Redstarts in the Public Gardens; at the Officers' Club were some beautiful Dorcas Gazelles caught in the desert close by; they were quite tame and I got some good photos of them feeding. Constantine, with its wonderful gorge 1,000ft. deep running three-quarters of the way round the town, was our next stopping place; here up near the Jewish Cemetery I am nearly sure I saw a Hoopoe, but have omitted it from my list. On the 16th we took a walk through the gorge which is full of birds; numbers of Lesser Kestrels were flying backwards and forwards, in and out of their nesting holes in the great cliffs; here and there one would meet a group of Egyptian Vultures sitting about the places where the town sewage flows into the river, waiting for some delicate morsel that might chance to pass that way. This brought the Vultures down much in my estimation, as the smells in that gorge were quite beyond description. About the middle of the gorge I noticed, along with the Jackdaws, a flock of dark brown birds in size and appearance very like our Jackdaw, but of quite a different colour. I thought at first they might be young birds, but Dresser makes no remarks on any of the Jackdaws having brown young; I should be very pleased if some reader could give me information on this subject. Dresser's *Manual of Palearctic Birds* is a first rate book, and often decided a species for me by its clever descriptions. I strongly recommend it as a most useful and portable book. In the market I saw Ringed Plover, Sandpipers, Quails, Larks, Blackbirds, Thrushes, and skins of wild cats, badgers, mongoose, and jackals.

On the 17th we reached Hamman Meskoutine, to my mind the most beautiful place visited by tourists in French North Africa; here one sees the third hottest spring in the world flowing over what appears to be a still waterfall composed of glittering white lime deposited by the spring which in different

places comes bubbling out of the earth at a temperature of 203° Fah; quite hot enough to boil eggs or vegetables.

Here, in the fields close to the hotel, were numbers of Goldfinches, Dusky Bulbuls, Vultures, Buzzards, Barbary Partridges, and other birds. While I was there a civet cat was caught in a trap and put in a cage to be taken to Germany: the poor thing looked very unhappy and would eat nothing. They are very destructive to fowls. Another day a lynx and a jackal were brought in by a hunter. When walking through the fields I often came across the diggings of wild boars; the hotel people had a tame wild pig which had been caught young close to the house. Tortoises were common.

Our last stopping place in North Africa was Tunis, where I noticed very few birds, it being much more of a town than the other places we had visited. The Flamingo was conspicuous by its absence, although some guide books will tell you otherwise. I was told by some people there that to see them we would have to travel about 100 miles inland. I visited the naturalist in the Rue Al-Djazira, No. 19, and bought some skins.

At the Carthage Museum I saw a number of Ostrich eggs dug up intact from the ruins of ancient Carthage; some had a network pattern on them, others were quite plain, with a large hole in the end surrounded by six smaller ones.

As everyone knows, North Africa is in the Palæarctic region, so that the common birds one sees every day are just like our British species, and in my list I have only a few that are not known in the British Isles.

Of the books published on the birds I could only get a few, they are as follows:—Gurney's *Rambles of a Naturalist*, Dixon on *Algerian Birds*, Canon Tristram's *Great Sahara*, and some articles in the *Ibis*, and *German Journal of Ornithology*. Before I left home I enquired about bringing a gun, but was told so many stories about the trouble I should have in getting it through, that I decided not to take one, for which I was very sorry afterwards, as I found the French had no objection to any person bringing one fowling piece with their luggage, as long as there are no cartridges; the licence costs about 30 francs in Algeria.

REVIEW.

PARRAKEETS.*

With the present number Mr. Seth-Smith concludes his interesting work on the Parrakeets suitable for aviculture.

From the point of view of the ordinary aviculturist the parts increase in interest with every successive issue. There will be a very general regret that the work has come to an end. But as Mr. Seth-Smith has already found that fresh information and one new importation have rendered an appendix necessary, may we not hope, that a few years even will render an enlargement, or, at any rate a continuation of the work, necessary?

In this number we are at the opposite pole from the earlier ones. There is much to be said against the Conures as cage birds—not a little against the Lorikeets; but who can say anything against New Zealand Parrakeets, Turquoisines, and *Nymphici*?

All we can wish is that Mr. Seth-Smith *could* have told us more about them—about *Nymphicus* for instance. *Why* does this bird live so short a time in captivity? *Why* does it not do as well as the Cockatiel? Nor do I very well understand why the Ground Parrakeet (*Pezoporus*) was never imported. I have not only never seen it, but with the exception of the Zoological Gardens, I have never even heard of any one having kept it.

If I may find a fault with the present part, it is that we have not been given a coloured plate of this bird and of *Geopsittacus*, which also I have never seen. But I do not think *night* Parrots suitable for aviculture, and doubt if they would live long caged.

Talking of plates, I have a criticism to make. Much as I admire Mr. Goodchild's drawings, the plate of *Cyanorhamphus unicolor* is misleading as to its size. Look at *auriceps* and it; would not one say they are of the same size from the plate? Yet *auriceps* is smaller than *novæ-zealandiæ*, while *unicolor* is

* *Parrakeets, a handbook to the imported species*, by D. SETH-SMITH, F.Z.S., M.B.O.U. Part VI. London: R. H. PORTER, 7, Princes Street, Cavendish Square, W.

very much larger. And from my recollection I should say *unicolor* was not so yellow a green as here depicted.

Mr. Seth-Smith's work is valuable, not only because he tells us what aviculturists have found birds require, but also their habits in a wild state. The aviculturist wants to know both. Sometimes the knowledge may help him in treating the bird when ill.

While on the subject of health, one may be permitted to regret that as the book was written with a view to birds in confinement, Mr. Seth-Smith has not given us a chapter on Diseases and their treatment. He may have felt that we know too little for him to venture on ground necessarily so empirical, but it is from everybody adding their mite of experience that we may hope to arrive at any sure knowledge of how to keep our birds in condition. I am always hoping that some day the Pasteur of feather picking and French moult may arise. But till then—till some man will devote himself to the scientific investigation of the causes of these two plagues of the Parrot keeper, everyone should bring his quota of experience to the common stock.

Last, but not least, there is a capital index. Works of reference—and this will be a work of reference—are useless without one, but this one seems to be unusually thorough, thereby doubling the value of the work.

In conclusion, while cordially recommending Mr. Seth-Smith's well got up book to any one who wishes to make a start in the all too fascinating pursuit of aviculture, let us hope that either Mr. Seth-Smith will himself embark on some of the larger species of the family *Psittacus*, or else inspire some one else to follow in his footsteps and do it. The Short-tailed Parrots—even the Amazons alone—would not prove less interesting.

F. G. DUTTON.

CORRESPONDENCE, NOTES, ETC.

THE ADMINISTRATION OF MEDICINES TO BIRDS.

SIR,—In Mr. Gill's report on Mr. Mason's Nonpareil in our November number I note that he makes some remarks on the above subject. I may say *en passant* that the "some people" could not have been intended by Mr. Gill to refer to myself, though I plead guilty to being somewhat in accord with the views that he was evidently alluding to.

Mr. Gill says that "some people" do not understand the treatment of the lower animals, and then goes on to give us his own plan of giving medicine to a bird. For "two or three consecutive days" we are to carefully note the amount of water the sick bird takes and then we are to add to the average amount daily consumed (ascertained by the above method) the proportion of medicine that will give the required dose. In order that the bird's whims and fancies may not defeat us, we have then to watch whether the bird drinks more freely or less freely than heretofore, and either to take out the water glass from time to time, or else to add more medicine as occasion may require. This is to a certain extent an improvement on "giving a course of iron by dropping an old knife in the well," but it seems to involve the necessity for constant supervision of the patient, which I am afraid would hardly be possible in the case of most people who have daily duties to perform.

But given that this question can be satisfactorily arranged, what I want to know is whether, *if the case is one that medicine can benefit*, is it wise to delay its administration for three days while we are deciding the capacity of the bottle that is to hold it? Such a measure of expectancy would not commend itself to us in the case of a sick child, and taking into account the difference between a child and a bird with regard to both size and longevity, the delay of a day means several times more to the latter than the former.

Mr. Gill goes on to say that "to catch up and administer medicine to a nervous bird is courting disaster." In this I perfectly agree with him, and I should think everybody else does likewise. I certainly cannot call to mind that I have ever seen or heard such a course recommended, and should have thought it was needless to warn us against such a practice.

I may add that I hope to shew later on that the very obvious difficulties that exist in the way of administering remedies to sick birds are of not much practical account.

W. GEO. CRESWELL.

THE INFLUENCE OF DIET ON THE AVIAN DEATH-RATE.

SIR,—I feel that for once I must break through the rule I have laid down for myself of not discussing scientific matters with those who have not studied them sufficiently to warrant their taking upon themselves the rôle of critic. But since a letter appeared in our magazine last month over Mr. Gill's signature, and ascribing to me a position which I have never taken up, and which indeed I should be deterred from taking up by ordinary regard for my own reputation, I am perforce compelled to say something in answer.

No one among my lay readers who has intelligently read the "Story of Bird-Death" as far as it has gone, or even my short article in this magazine, can for a moment believe the statement or implication that I have ever said that egg is the only cause of septicæmia as occurring in cage birds. No one who is an expert in bacteriological pathology (which is alone recognised to-day in those cases which are either known or suspected to be due to the action of micro-organisms), and who has read *even one page* of any of my articles (*wherever* they have appeared) would for a moment realize that I *could* say such a ridiculous thing. Apart from numerous other indications in Mr. Gill's utterances from time to time, his very implication that I have said such rubbish is a proof that he has never read with intelligent appreciation either my articles or those of any other writer on micro-organisms and their effects. Even supposing he had only had the opportunity of seeing my very short paper in the *Avicultural Magazine* for Sept. which by its own internal evidence can be seen by any unbiassed reader to be referring to ordinary cage birds only, it is difficult to account for his having written what he has. And when we consider that being a member of the Foreign Bird Club Mr. Gill has had the opportunity of reading month by month the "Story of Bird-Death," his statement that "we are asked to accept as a fact that egg-food is positively dangerous as an article of diet for birds, *without the slightest explanation as to how this conclusion has been arrived at*" (the italics are mine), can only be palliated by the assumption that his memory is so bad that he has already forgotten the instalments that appeared in *Bird Notes* so short a time back as September and October last.

Mr. Gill's letter simply bristles with evidences of his entire inability to grasp the salient points of my argument; for instance I have never anywhere said that enteritis cannot be produced by any other means than through the agency of egg-food; neither have I at any time ever given any person the right to assume that "to refrain from the use of egg-food will mean a "perfect immunity" from the disease. I have been particularly careful not to convey any such absurd impressions in my articles, and to invent and then father upon me such opinions can only be regarded as outside the bounds of legitimate argument or criticism.

I note that Mr. Gill asks me some questions. He will find them answered in some articles I sent to the Editor of *Bird Notes* last August, and which will appear in November, December, and January. (The November issue will have been published before this letter is in print). It is true that these papers are very sketchy and incomplete, but they were only designed to help my layman friends; still they are at Mr. Gill's service, and they may perhaps help him to understand what I have already written, while at the same time giving him a little information on the subject of comparative immunities. One of the questions however I may answer now, although I should not have thought it necessary to explain to him that when he talks of the enteritis produced by cold water, frosted food, bathing, etc. he is talking in the language of long ago, when we supposed such causes acted directly, whereas we now know that the effect of cold is merely to lower the resistance of the individual against the attacks of a micro-organism which would otherwise have left him unscathed.

There are many points in Mr. Gill's letter which very temptingly invite attack, but for the present I will resist the temptation. There is however on page 51 a minor error that perhaps he would like me to correct. Septic enteritis is not the same thing as "enteric." This term is usually employed to designate enteric fever, or as we used to term it—typhoid fever, and septic enteritis is, as the French say, quite another pair of sleeves.

In conclusion, I must say that up to now I have been much exercised in my mind to understand why Mr. Gill should have undertaken the task of attempting to criticise me. But I now wonder no longer, for I have just referred to his report of necropsies in the October number of the *Avicultural Magazine*. I see there that without bacteriological investigation he is able to definitely say in two cases of acute inflammation of the liver that the disease was not infectious; also that a case of enteritis was not of the contagious (*sic*) form. Seeing that neither of my pathologist friends, nor myself, are able to perform this miracle I must, I suppose, recognize that I have met my master.

W. GEO. CRESWELL.

[We do not for one moment doubt that Dr. Creswell is perfectly right when he tells us that yolk-of-egg is infected by septic bacilli more readily than most substances, and we fully appreciate the value of his discoveries, but we know very well that if captive birds, which are fed to a large extent upon this substance, are kept properly clean, its ill effects will not be apparent, and the birds will live for years in perfect health.

We are quite sure that very few aviculturists will discard egg-food when they have proved, by years of experience, that it is the most useful ingredient in insectivorous food mixtures. We are well aware that Dr. Creswell regards mere experience as of next to no value, but we are

content to be numbered with those whom he is pleased to consider "are not equipped with anything beyond 'experience.'" We have yet to learn that Dr. Creswell has had much experience himself in keeping any but the hardier birds, and, until he can show that he has been successful with delicate insectivorous birds without the use of egg in any form, we are content to continue to use that which *every experienced aviculturist* has proved to be good.

We cannot see that anything can be gained by prolonging this discussion, so it must now close.—ED.]

HOMING INSTINCT IN PENNANT'S PARRAKEET.

SIR,—The following experience with a Pennant which escaped may interest some of those who keep Parrakeets, and proves that it is not always hopeless to get them back if by chance they should get away.

A cock Pennant which I had only had two months was rather wild, and, when anyone entered the flight, would fly backwards and forwards from end to end so rapidly that some care was required in getting inside. This pen contained a cock Barnard and some young Golden Pheasants, and I sent my brother one morning to feed them as he had previously done so; but, on entering, this Pennant made a dash towards the door, knocking off his hat, and flew into some trees close by. The door of the pen is 6ft. by 2ft., and my brother 5ft. 11in. So there was no great amount of space.

After reporting the matter we went to look for the bird, and I must say I felt very little hope of getting him again. But I had a recollection of a remark about some bird not being so likely to return as some of the Broadtails in Dr. Greene's "Parrots in Captivity" (which book by the way I sincerely wish he would continue as the text is interesting and instructive to read and the illustrations are the best I know of, my bird being the image of the illustrations and colour quite as intense). Mr. Pennant was not far off, and on whistling his call he kept answering; then we lost sight of him for some time, and in the meanwhile had shut the other birds inside their house, throwing open the aviary door with a long string attached so that if he did return we could close the door from a distance, keeping ourselves out of sight. I tried to locate him with a field glass, but could neither see nor hear anything when, on looking round, lo and behold he was on the aviary, but at the opposite end. trying to get to some Rosellas and another pair of Pennants, and also the end of the string was that way. So we made a wide flanking move to watch him from a distance, when, on reaching the spot, what was our delight to find him inside his own compartment. A pull at the string, and he was once more secure.

I attribute the success in recapturing the bird to his not going right away in the first place, and either answering his call or else his being able

to hear the other birds; but evidently he knew his own pen. He has been much quieter since his experience of liberty.

ALBERT J. SALTER.

YELLOW BUDGERIGARS.

SIR,—A pair of Yellow Budgerigars came into my possession last April. Later on in the year I came across a cocoa nut husk that had been hidden away for years. This was hung in a small cage as an amusement for them to nibble. As the opening to the husk was small, I noticed after a time they had bitten away more than an inch, but it had been taken off as straight as if it had been sawn. Then a few days after they took possession and cleaned out a lot of the inside lining of the husk.

I kept a daily chronicle of their doings.

On the 10th September I heard a twittering, and a few days after there was a shell at the bottom of the cage. Often both birds were in the husk. All went on peaceably until the 28th September, when I found the hen chasing the cock all over the cage. I thought it was to encourage the young to make an attempt to fly. About 11 o'clock there were cries of distress, and the hen had pinned the cock down in a corner. I had to choke her off to make her loose her hold. The poor cock's mouth was bleeding, part of the left cere pecked away, and the right shoulder smothered in blood. He was put into another cage, and lay at the bottom as if about to die. He was ill for some days, and I was afraid I should have lost him, but he is now picking up again.

Their only young bird was a solitary female which flew out for the first time on October the 9th. It was rather fainter in colour than its parents, but almost as large as the mother.

I have never put Budgerigars up for breeding before, and I would not have troubled you with this, but that I thought it must be an exceptional case for a hen bird to suddenly assault the male and nearly kill him.

W. T. CATLEUGH.

[This was probably the result of too close confinement in a cage. They would do much better in an aviary.—ED.]

BREEDING RESULTS.

SIR,—In spite of the bad summer we have had, I have reared in my outdoor aviary two Golden-breasted Waxbills, nine Saffron-finches and a Cordon-bleu. I had a nest of young Red-headed Gouldians, but a Parrakeet got in by accident and killed them.

N. L. F. DUNLEATH.

MARKING RINGS FOR PARRAKEETS, &c.

SIR,—I think a word of warning as to the danger of ringing Cockatiels with the ordinary metal ring (that is opened to clasp the leg and then closed again) may be of use. I have met with three cases in which the birds had accidentally pulled at the ring until they had caused one end to overlap and in some way had got them so tight as to cause a serious injury and much suffering. In one case the leg was cut to the bone, and it was with very great difficulty I got the ring off. It was so embedded in the flesh that I had to snip it off bit by bit with a strong pair of nail scissors. In a second bird the tight pressure had turned the foot quite dark coloured; and, in the third bird, the ring had in some way been worked over the hind toe (which was almost cut in two) as well as the leg.

The birds must have done it themselves out of pure mischief, as, in the case of my Doves, the rings stay on for years without in any way injuring the birds or causing them discomfort. It is really necessary in some way to mark young birds, and if any member can tell me of a *safe* ring for Cockatiels, etc., I shall be very grateful.

ROSIE ALDERSON.

DOVES EATING WORMS, &c.

SIR,—In reference to Dr. Butler's query in the October No. of the Magazine as to whether it is the hen *alone* of the *Columbæ* which feeds on insects and worms, I have found that *both* sexes enjoyed a little change in this way from their seed diet.

My Bleeding-hearts eat both mealworms and small earthworms, and the White-fronted or Violet Doves, and also a Necklace Dove enjoy a few mealworms now and then. I have about twenty kinds of Doves, and I find that ground biscuit (fancy lunch) and ground peanuts are very helpful for keeping the birds in health. It is quite amusing to see how the Doves are on the look out for their biscuit and nut each morning. I keep each article in a separate vessel, and the nuts especially are much appreciated. The fact that it is *very* seldom indeed that I lose an adult Dove proves, I think, that the diet suits them; and not only this but they never seem ill and always look in good condition with their feathers "tight" and glossy.

I have not found my three Tambourine Doves very interesting so far. They are beautiful little birds, two cocks and one hen. They spend nearly all their time in the shelter, but come out sometimes into the flight towards evening. They greatly enjoy sitting out in a heavy shower of rain. These Doves have never nested with me, though I now and then hear the cocks cooing, and once I saw one carrying a twig in its beak.

The ground nut is sold by Messrs. Armitage, Seed Merchants, Castle Gate, Nottingham, in two sizes. The largest size (sifted) is the best for Doves.

ROSIE ALDERSON.

HEN SHĀMA; THE GREAT RACKET-TAILED DRONGO.

SIR,—You will be glad to hear I have succeeded in getting the hen Shāma; it is only about two-thirds the size of the cock; are they always a good deal smaller?

Also I, rather rashly I am afraid, had a Drongo sent at the same time, fascinated by the account of your "Puck" in Greene's *Favourite Foreign Birds*; but now I am rather alarmed by being told that they are very delicate and need exceptional care and *warmth*. I can quite understand it at first, as it is a scarecrow, though even now a taking bird; but will it really need greater warmth than, say, the Shāma, when once it gets a little more clothed?

I should be much obliged if you could give me a few hints as to feeding. I am giving it Dr. Butler's soft food mixture, with as many insects as I can, and mealworms, also fruit, especially grapes, and a little cooked meat; at present it does not seem to eat much except what is given in the fingers, but then it only came last night. Would it be safe to spray it a little to help it to get clean? Its feathers are shocking, and it seems to have no undergrowth.

RICHARD H. WILMOT.

The following reply was forwarded to the Rev. R. H. Wilmot.

Speaking of the two birds in captivity, there is no basis on which one can form a comparison between the Drongo and the Shāma, excepting that they both may make delightful pets. The latter is not "delicate," and if neither over-exposed nor over-fed will live without giving trouble for a long time. The Drongo, on the contrary, requires a good deal of careful treatment if you wish it to live in good condition more than two or three years.

A long time has passed since I wrote the story of Puck, who was rather exceptionally nervous and timid. I have had three Drongos since those days; and the species is no longer an uncommon visitor to this country.

The Great Racket-tailed Drongo (*Dissemurus paradiseus* not *Chibia hottentotta*, the Hairy-crested Drongo, a very different bird), which presumably is the kind you possess, *must* be kept warm. In summer it will be all the better for a little outdoor life, especially when it can fly; but it cannot stand our cold springs and autumns, and needs shelter and watchful attention in such a summer as we have now had; and when it falls into moult in the autumn, not only must it be kept indoors but artificial heat is usually desirable, often necessary. *It requires much more warmth than the Shāma, if it is to last.*

But the real difficulty with the Drongo, to speak plainly but not prettily, is "Stomach." In this and in many respects it is remarkably like

that much abused and greatly misunderstood bird, the Cuckoo in captivity, another charming pet *if properly managed*, which it rarely is. The Drongo will not hop about, and pick up tiny specks of food and grit, though when it has full wings it will greatly help by catching flies and winged creatures. If one could supply it with insects all the year round it would be different, but one generally has to fall back upon meat. Let this be triturated as much as you like, it is not altogether suitable, and sooner or later you are faced with indigestion; and to add to your difficulties it will then swallow large stones, nails, anything it can get hold of in its endeavours to allay the terrible craving within—and occasionally it kills itself. It is this condition of body in the captive Cuckoo that causes it to greedily devour nestling Canaries, etc., which has given rise amongst ignorant persons to the supposition that the species is by nature carnivorous.

The Drongo is an insectivorous not a frugivorous bird. In the wild state it feeds on insects, whose wings, etc., seem to act as "food dispersers." Perhaps it rarely touches green-food or fruit, but it does (again like the Cuckoo) in captivity. Not as food, but as medicine place a grape or two within reach of your bird, and also a few *dry* half-withered non-poisonous leaves.

A Drongo out-of-feather like yours should be kept in a long low box cage, with no high perch. A low one should run along the front and another a little higher along the back with a slanting stick joining the two, so that it can readily sidle up and down. It cannot hop about like the Shâma, and is often excitable and nervous, and requires a good deal of patient management. If you can get the bird to descend to the lower perch for its food *and to take a sufficiency of it there* (some are much worse than others) place the dishes within easy reach, for it will not readily go on to the ground, although a specimen in full feather occasionally will. If you are not careful, it will fall into the ways of the spoiled Cuckoo, and will expect you always to hand-feed it; therefore do everything you can to make things easy for it to help itself. *If necessary*, have a shelf fixed near the higher perch, upon which to arrange the food-dishes. You must see that it does take food regularly, for it is too weak to be played with; moreover, the more regularly it takes its food, a little at a time, the better for the digestion. It may starve itself if not looked after.

Feed, according to the season, on cockroaches, earwigs, chafers, woodlice, spiders, flies, beetles, grasshoppers, grubs, almost any living creature you can lay your hands on. Naked nestling Canaries and Sparrows would form a valuable change. Also baby mice (cut up if necessary) would help. Mealworms are rather indigestible, but you must give some if you cannot get anything better.

Your Drongo will probably not touch the soft-food mixture. Nevertheless always provide some, and on the top place egg-flake (large), a little

cooked meat most carefully scraped, a bit of plain biscuit crumbled, etc. The latter may also be offered in the form of rather dry sop.

You should be very careful about spraying your Drongo in its present condition, but little by little you must get it clean. A very little spray in a warm room may encourage it to preen what feathers it has—but a chill might be fatal.

A *little* sulphate of iron, in flakes, placed occasionally in the drinking water may be beneficial. If placed conveniently, the Drongo would probably wash its face in the water-glass, but do not let it wet itself too much yet.

Scatter a little common white millet seed at the bottom of the cage. It may pick it up for grit instead of something injurious.

A female Shâma is smaller than the male, and the tail is not so long and sometimes much shorter; but a good hen Shâma is by no means so very small. Both males and females vary in size, song, and other details, partly according to age, but more so perhaps according to the part of India from which they come.

REGINALD PHILLIPPS.

THE ZOOLOGICAL GARDENS.

The fine new aviary near the Elephant-house is now practically completed, and should prove a source of interest to aviculturists next summer. Whether the money expended upon this aviary has been wisely used seems doubtful. Foreign birds which are less hardy than Gulls or Waders need more shelter than is provided by the foliage of a few trees even during a fairly warm summer in our climate, and should next summer be anything like that of 1903, we fear the new aviary will prove to be a great failure. If, instead of erecting this huge exposed aviary, built as it is on the north bank of the Regent's Canal, the same money had been spent in the erection of a range of smaller, properly sheltered, aviaries, with wire-netting of small mesh, it would, in our opinion, have been far better.

THE COUNCIL.

Dr. W. G. CRESWELL, having resigned his seat on the Council, Mr. T. H. NEWMAN has been appointed to take his place.

POST MORTEM EXAMINATIONS.

RULES.

Each bird must be forwarded, as soon after death as possible, carefully packed and postage paid, direct to Mr. ARTHUR GILL, M.R.C.V.S., Veterinary Establishment, Bexley Heath, Kent, and must be accompanied by a letter containing the fullest particulars of the case. Domestic poultry, pigeons, and Canaries cannot be dealt with. No replies can be sent by post.

CALIFORNIAN QUAIL. (The Lady Dunleath). Has been in aviary several years. [Ruptured blood vessel in the right lung caused death. Your feeding was quite correct].

PEKIN ROBIN, hen. (Mr. S. O'Reilly). Fed on soaked dog biscuit, Abrahams' Food, mixed sometimes with bread, or potato, currants, apple, and ants' eggs. [Your feeding is all right excepting for the crushed dog biscuit, which I have yet to be convinced is good. I would not use it as I should prefer fresh meat if I gave meat at all. The dessicated meat is very indigestible. Congestion of lungs caused death].

MADAGASCAR LOVEBIRD. (Miss Tate). Found dead. Has been out of doors since April. Seemed perfectly healthy. [Your bird had a fractured skull. I should be inclined to blame either the cock Redrump or the Rosella. All my reports are sent in on the 16th of month prior to publication of Magazine].

CHILOE WIGEON. (Mr. A. Cummings). Put into aviary 9.30, found dead in pond at 2.30. [There was a severe injury on top of skull under which there was a large blood clot, the pressure of which caused death. It was a female].

GREY WAXBILL. (Lady Carnegie). Apparently quite well yesterday. Found dead this morning. Had been several months in aviary. [Apoplexy was cause of death].

PITTA. (Mr. Reginald Phillipps). Arrived very weak, wings drooping, and in a state of irritability I have noticed only in dying birds. Careful nursing only caused temporary improvement. [Acute inflammation of liver and bowels was cause of death, nothing could have saved it. It was a hen].

LONG-TAILED GRASSFINCH, hen. (Mr. T. N. Wilson). Had it some months with five others of same species, Gouldians, etc. They have been quarrelling amongst themselves lately. [Concussion of brain caused death].

SNOW BUNTING AND AVADAVAT. (The Hon. M. C. Hawke). Found dead. [I should say something had frightened them, as the cause of death in each instance was concussion of brain caused by direct injury to the skull].

CRIMSON BISHOP. (Miss Woods). Found dead. Apparently healthy day before. [Apoplexy was cause of death].

PEKIN ROBIN, hen. (Mr. J. Watson). In perfect health yesterday, found dead this morning. [Bird was excessively fat and apoplexy caused death].

BUDGERIGAR AND MADAGASCAR LOVEBIRD. (Miss Tate). Both new comers. [Both birds died of concussion of brain. The Budgerigar was a young hen. Neither of these birds require artificial heat as they are quite hardy].

WEAVER. (Mr. Chas. L. Rothera). [Bird died of congestion of lungs. Many thanks for kind remarks].

ORANGE-FLANKED PARRAKEET. (Miss Showell). Found dead. [Apoplexy was cause of death. These birds being usually so tame, take but very little exercise, and being rather heavy feeders are prone to apoplexy if given as much food as they like].

WHITE JAVA SPARROW. (Mrs. M. Sherston). Has been ailing some days. Has had difficulty in getting up to the top perches. Had been sitting for ten days. I took eggs away and put her in a cage in a warm room. [Your bird died of a liver disease of long standing].

CORDON BLEU. (Mrs. Noble). Found dead. [The bird had a fractured skull, caused by direct injury].

RED-HEADED GOULDIAN FINCH. (Mrs. Johnstone). Appeared quite well the day before it was found dead. The aviary is over-run with mice. [The bird died of concussion of the brain caused by direct injury to the skull. My advice, *re* mice, is do not try to keep them out, but wire off a small space where they come into the aviary and always keep a break-back trap in the run; you then destroy the vermin instead of keeping them out of one place to do possibly more harm in another].

GREY WAXBILL. (Mr. Yewdall, Leeds). Kept in outside aviary. Other birds in aviary are Mannikins, Lovebirds, Cardinals. [Bird died of concussion of the brain. I should suspect Cardinals or Lovebirds. I think our winters are very trying to such delicate birds].

BLUE-WINGED LOVEBIRDS. (Miss Tate). In outdoor aviary. Found dead. [Bird died of acute congestion of lungs. I have usually found this species very delicate and should advise artificial heat. Am very glad to assist you].

VIRGINIAN NIGHTINGALE. (Miss Shepherd). It was hatched in aviary last May. Has never been noticed to ail anything. All right last night, found dead this morning. [The bird was apparently healthy in every respect, and I can only suggest death was due to nerve shock, possibly caused by a fright].

Cloth, gilt top, Small 8vo., Six Shillings net.

THE
BIRDS OF TENNYSON,

BY
WATKIN WATKINS, B.A. CANTAB.

Member of the British Ornithologists' Union.

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"Many as are the volumes which have been written on different phases and aspects of our late Laureate's works, this, we think, is the first time that a whole book has been devoted to "The Birds of Tennyson." Mr. W. Watkins, the author, is a member of the British Ornithologists' Union, and has, therefore, a scientific as well as a literary interest in the subject. And his verdict in the matter is this—that 'No poet is so satisfactory to the ornithologist [as Tennyson], for no poet had a more accurate knowledge of birds or had a happier power of describing their peculiarities.' Mr. Watkins' pages are, indeed, themselves a testimony to the acuteness as well as the frequency with which Tennyson described the 'feathered tribe.' All this, of course, is an old story to the students of the poet, but it is pleasant to find Tennyson's references to birds collected and systematised as they are in this agreeable treatise, which is, as it should be, carefully and usefully indexed. In his introduction Mr. Watkins deals with Tennyson's allusions to birds in general, and in subsequent chapters discourses successively of birds of song, birds of passage, birds of prey, birds of sport and so forth. The result should convince those who are not already convinced that as a poet of the birds Tennyson ranks with Shakespeare. Mr. Watkins, as a naturalist, of course appreciates fully the poet's stanzas on 'The Thristle,' of which the ignorant have been accustomed to make game. He recognises the fidelity with which the bird's 'note' is reflected in such lines, homely enough, as—

Summer is coming, summer is coming,  
I know it, I know it, I know it.

And he gives other instances of the poet's successful translation of birds' song into literary speech."—The Globe.

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"Lovers and all in quest of unliackneyed forms of endearment could not do better than add to their possessions a copy of 'The Birds of Tennyson,' by Watkin Watkins. The book is a well-compiled number of extracts from the poems of Tennyson, Wordsworth, Shakespeare, Byron, Chaucer, Milton, Cowper, and other poets, in which the manners and customs of birds are introduced as similes, in dainty lines. The volume contains some excellent illustrations of birds by G. E. Lodge."—Pall Mall Gazette.

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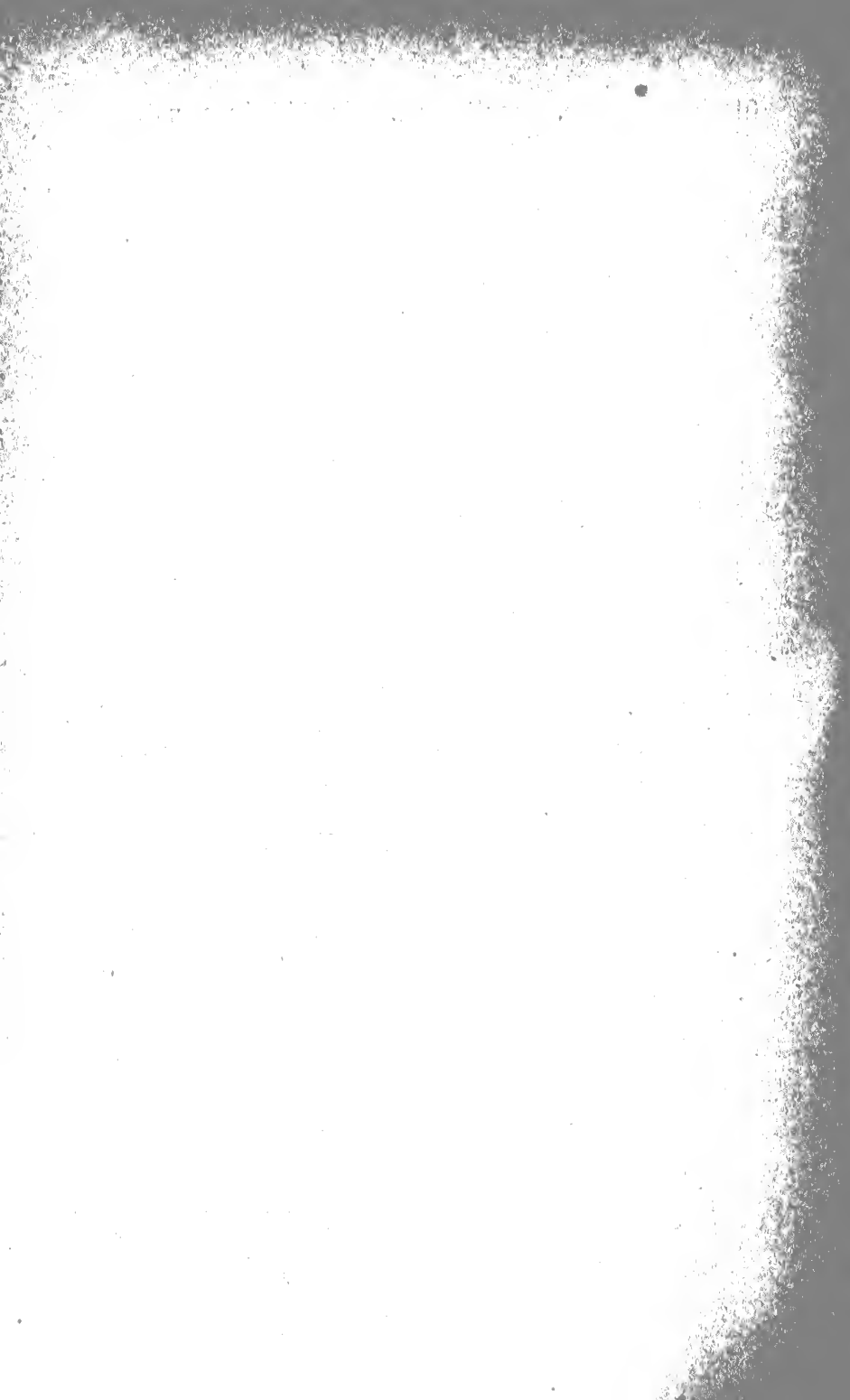
"Mr. Watkins, who must have spent a vast deal of time in the study of Tennyson's poetry from the natural history point of view, publishes a number of extracts, and enlarges on them in a most interesting manner. Mr. Watkins' book should prove very acceptable to Tennyson lovers."—The Yorkshire Post.

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"'The Birds of Tennyson' should have a strong attraction, for its well-written pages are a powerful proof of the great influence exercised upon the impressionable mind of the poet by the beauties of form and the joyous songs of the feathered kingdom. There is another class of readers who should also find much pleasure in a perusal of the volume—those lovers of Tennyson as a poet who, not taking any special thought about birds, will be astonished to find how much their favourite poet knew about them and how narrowly he observed the life that moved about him. They will find, too, by the aid of Mr. Watkins' comments as an expert, how appropriately Tennyson employed his innumerable references to birds of all kinds, and especially song birds. Excellent illustrations by G. E. Lodge enhance the value of the volume."—The Shrewsbury Chronicle.

LONDON :

**R. B. Porter, 7, Princes Street,
CAVENDISH SQUARE, W.**



NOTICES TO MEMBERS—Continued.

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III.

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THE JOURNAL OF THE AVICULTURAL SOCIETY.

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(Continued on page iii. of cover)

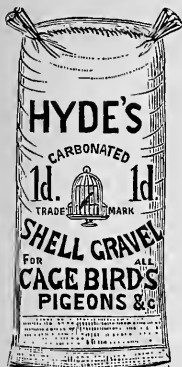
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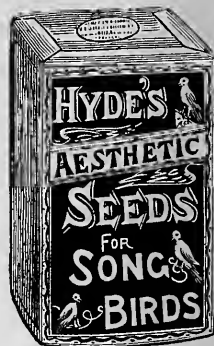
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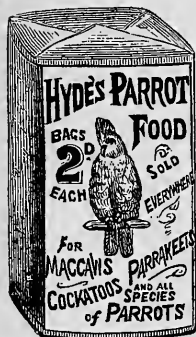
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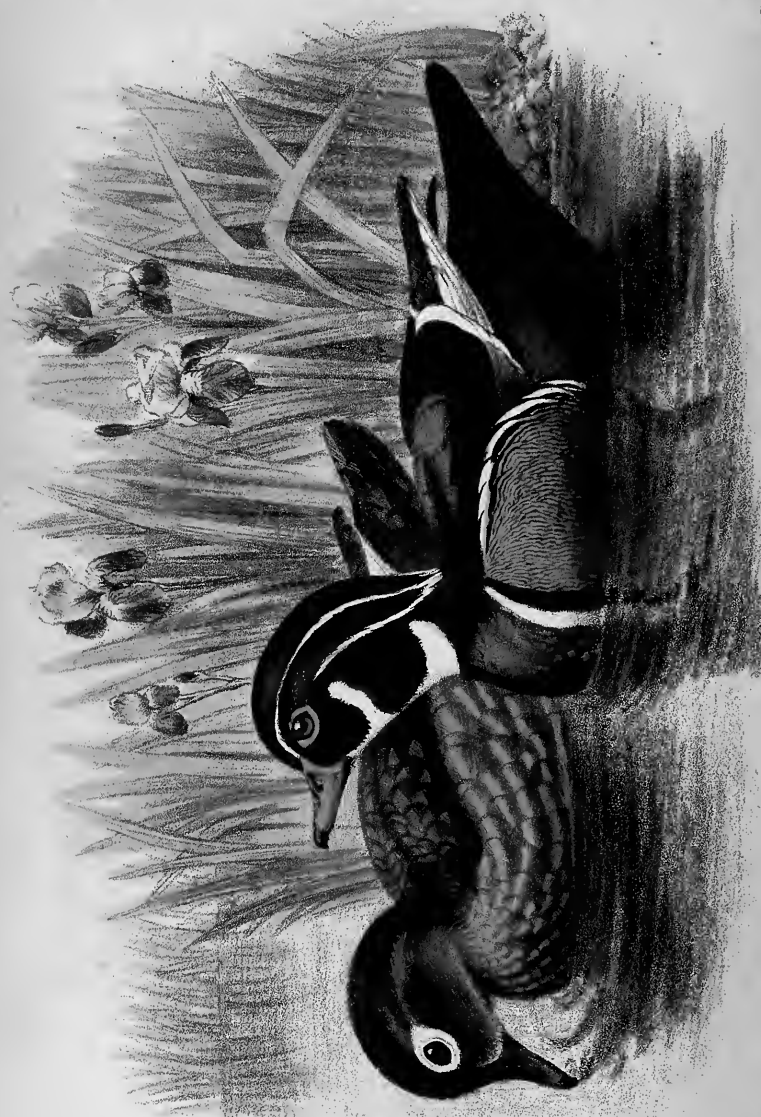
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New Series.—VOL. II.—No. 3.—*All rights reserved.*

JANUARY, 1904.

THE SUMMER OR CAROLINA DUCK.

Æx sponsa.

By FRANK FINN, B.A., F.Z.S.

It is a curious fact that in several cases genera comprising beautiful and remarkable species contain only two of these; and examples may be found in the two Peafowls, the Amherst and Golden Pheasants forming the genus *Chrysolophus*, and the subject of the present article and its ally the Mandarin Duck (*Æx galericulata*). These two members of the genus *Æx* differ conspicuously from other Ducks, not only by their short high bills, crested heads, and long broad tails, but by the unusual shape of the wing, which is unlike that of any other Duck. In the Ducks generally the inner secondaries, commonly and conveniently called tertiaries, reach nearly—sometimes quite—to the ends of the primaries; while in the Summer and Mandarin Ducks these feathers are quite short, so that the primaries are largely exposed, and the general form of the wing is like that of a Pigeon. The colouring of these primaries, silver-grey on the outer web and dark on the inner, with a steel-blue tip to this, is also unique among the *Anatidæ*. They are small birds, only about the size of the Wood Pigeon.

With regard to the distinction of the two species from each other, there is of course no possibility of any difficulty with the males; Japanese art, if not observation, has made everyone familiar with the Mandarin's chestnut whiskers and wing-fans, both of which are wanting in the Carolina, whose extreme rich-

ness of colouration, however, makes great amends, and is well rendered in Mr. Goodchild's beautiful drawing.

The females of the two species are very much alike at first sight, but there are two unfailing methods of distinguishing them; in that of our present subject the wing lining is pencilled black-and-white, and the bill invades the face-feathering at the sides in a point, while in the Mandarin Duck the wing-lining is plain drab, and the face-feathering meets the base of the bill almost in a straight line. Moreover, the Carolina is a heavier bird and more level in its carriage and lower on its legs than the Mandarin as a rule, although one of the latter species I had this spring distinctly resembled the former species in this respect. She also usually shows a strong gloss of green and purple on the upper surface, which is lacking in the Mandarin Duck, and has a wider white eye-ring. Both the white on the face and the gloss on the plumage increase with age, and the former may so extend as to meet above the bill.

The Carolina Drake in undress does not resemble his Duck by any means as closely as the Mandarin, which, except for retaining his orange feet and usually more or less of the pink on his bill, is almost indistinguishable from her. He loses his crest, it is true, but still retains his white throat-marking, and shows a clear grey tint on the sides of the face, so that he is always readily distinguishable. Young Drakes wear this undress plumage as soon as they fledge, and so can be distinguished at once. The fact is a remarkable one, and together with what I have observed in other species, leads me to believe that the "undress" plumage of modern Drakes represents what was probably the full-dress of their less highly-evolved ancestors.

This plumage of the Carolina Drake appears to be very little known; Miss Hubbard mentions it in her valuable book on Ornamental Waterfowl, but does not mention it as appertaining to the young Drake, and I only observed it recently in three young birds bred in the London Zoological Gardens. Neither the old Drake in undress nor the young one in first plumage is described in the volume of the British Museum Catalogue dealing with the Ducks, and in the Bird Gallery at South Kensington

an undoubted Mandarin Drake in undress is, or was when this was written, set up to represent that phase in the Carolina.

I ought, by the way, to explain why I use this latter name for the Summer Duck. It is simply because "Summer Duck" is only the book-name of the bird; to Waterfowl-keepers, both in England and France, it is usually known as the Carolina (*Carolin* in French), and under this name it constantly appears at shows. In its native home of North America it is called the Wood-duck, but this name has not gained currency over here.

It has a wide range in the United States, but is becoming terribly rare owing to reckless shooting, and as it does not go far north to breed, is in a fair way for extinction. When unmolested, it is willing to be familiar with man, and, being a tree-builder, can be conciliated by means of nesting-boxes, the more so as it haunts inland localities and narrow waters more than most Ducks. Its natural breeding-places are in holes in trees, and it displays a strong perching proclivity and great skill in threading its way among trees and branches on the wing, the ease of its flight, like the form of its wings, being comparable to a Pigeon's.

The young, which, owing to their sharp little claws, are excellent climbers, are allowed to fall from the nest, which they do without harm, being so small and light.

The Carolina Duck has been known familiarly to European aviculturists far longer than the Mandarin, having bred freely and been well distributed early in the last century, when the latter was still scarce and dear. Under these circumstances, Carolina Ducks were often sold with Mandarin Drakes as their proper mates, but in spite of this no hybrids were ever bred—a most remarkable fact considering the close alliance of the two species. Of late years, however, if I recollect aright, a hybrid was bred by one of our members, which did not live to attain maturity. This was a great pity, as, if a male, it would in all probability have been a very beautiful bird, and of a beauty quite unique. I should recommend anyone who is trying for the cross to use the reverse mating, putting a Carolina Drake to a Mandarin Duck a match which has probably seldom been tried. Some years ago, it is true, there were on the Northern Pond of the Zoological

Gardens a pair of Mandarins and Carolina Drake, with which latter the Mandarin Duck was mated, but they do not seem to have bred. However, in difficult crosses there is nothing like making frequent experiments, and now that Carolinas are dearer than Mandarins, there is ample opportunity for such.

In disposition and habits the Carolina, as seen in captivity, is much like its Chinese ally; being active and hardy, much attached to its mate, and well able to defend itself against even larger species. The two species of *Aex*, although usually averse to alliance, agree well together, and the Drakes admirably set off each other's beauty. The Carolina, however, is less active, restless, and excitable than the Mandarin, and the Drake does not "pose" in the laughably self-conscious manner of that species. His note is also quite different, resembling, to my ear, the word "An-nie," as called out with an exasperated inflection by an irate matron to her errant offspring. He would seem also to be more affectionate than the Mandarin Drake, for M. G. Rogeron, whose book "Les Canards" is, for character-study, the best avicultural work I have ever seen, has on more than one occasion known him to die of grief for the loss of his mate. He also, according to this gentleman, has the habit, unique, I believe, in the Duck family, of calling the Duck to take any special delicacy he may find in the shape of a worm or small fish; although it must be admitted that, if she does not hasten, the temptation to swallow the tit-bit will prove too much for her husband.

For breeding Carolinas in captivity the most suitable nesting-place is a hollowed stump with a little duck-ladder leading to the cavity; but other forms of covered nests will also serve, the stump being of course the most natural. If the Duck can have liberty with her brood on a piece of water safe from rats, crows, and predaceous fish, and well supplied with natural food, she may be left to manage her own family, artificial food being added in the shape of meal and dried flies thrown on the water. But if artificial rearing is desired, the Carolina's eggs should be set under a steady light hen (such as the Silkie-Pekin cross), while the Duck herself may be allowed to try her luck with Wild-Duck's or Call-Duck's eggs. The young Ducklings which are being reared artificially can be best managed, according to M. Rogeron, in

sunny pens under cover; for the first fortnight they are very delicate, and should not be allowed to get wet; care should also be taken to see that they feed well, egg-and-bread-crumbs, dried ants' eggs, duckweed, and chopped calves' lights being provided. When well started they are very hardy, and as adults do as well as any Ducks. As two Ducks may be run with one Drake, and as several sets will live together or with Mandarins, it will be seen that a large number of these birds can be reared with proper attention, so they will more than pay their way, especially as they are now about ten shillings apiece dearer than Mandarins.

The climbing propensities of the young need to be guarded against, and even the adults when pinioned will climb several feet of wire-netting if they mean to get out of their enclosure, though they are on the whole much more ready to keep within bounds than Mandarins.

It is, I think, a great pity to pinion these beautiful birds at all, since the operation disfigures them more than other Ducks, owing to the fact that so much of the primaries is normally visible. If they have to be kept in an enclosure it is better to stretch netting over this and leave them the use of their wings, putting up a few dead boughs as perches; while on a large piece of water every attempt should be made, by breeding from the tamest birds, to establish a homing strain.

In conclusion, I would urge those aviculturists who are in a position to breed these birds to do what they can to save this lovely species from the fate which awaits it. The market is now entirely supplied by captive-bred birds: indeed, one of our leading Waterfowl dealers told me some time back that, far from getting any supplies from America, he would send birds there if he could get them—none being then on sale. Now, I am glad to say that the New Zealand Acclimatization Societies are bestirring themselves afresh in the matter of birds, and I recommend any who care for the preservation of beautiful species to do all in their power to facilitate, by exchanges, the introduction of the Carolina into New Zealand, where it would have, as a species, a new lease of life. The Mandarin is already there, though only as a captive ornamental bird as yet; but it can be readily obtained

from China.* So that it is the Carolina which should have the preference as a subject for acclimatization at present; and although the export of most of the native New Zealand birds, some of them very desirable, is now prohibited, I have no doubt that, if exchanges could be established between the Acclimatization Societies and aviculturists here, permission could be obtained for the export of a limited number. In this way Carolina breeders could do an inestimable service to aviculturists at large, and I for one should be very happy to do anything I could to help in establishing communication between New Zealand and any of ourselves.

SOME FIELD NOTES IN SOUTH AFRICA.

By Capt. BOYD HORSBRUGH.

I enclose a few notes on birds I observed in the Western Transvaal during two years spent in constantly moving from place to place in the country lying between Mafeking, Zeerust and Rustenburg in the northern part, and Kimberley, Klerksdorp and Bloemhof in the southern. I was at the time absolutely without any book on S. African birds, or my notes would have been very much fuller.

The first bird I had was a young Meyer's Parrot (*Psecephalus meyeri*) which was given to me by an old Dutch vrouw: I carried 'George' from pillar to post for a matter of 13 months; by day he shared a stout wooden box about 12 inches square with a Ground Squirrel (*Xerus capensis*) belonging to my servant, and they both slept as close together as possible, and were the best of friends. The Parrot, when I first got him, was only just out of the downy stage and had to be fed for some time by hand. Later on he learnt to feed himself and saved me much bother. On arriving in camp, the box was opened, and the strangely-assorted couple had a good square feed of Quaker-oat porridge with lots of brown sugar, the more sugar there was the

* I hope that the New Zealand Societies will take up this species also for acclimatization. I have, since writing this article, seen in some feather sale catalogues Mandarin Duck feathers advertized by the pound!—F. F.

better they liked it. After that they ran loose about the tent and the waggon till dusk, occasionally taking a mouthful or two out of a mealie- or maize-cob. When night came they were both returned to the box. I left this bird with a lady in Mafeking, and was very grieved some time afterwards to learn that he was accidentally drowned in a bath, while the poor Squirrel died of apoplexy—too much sugar I fear.

At various times I had nine of these Parrots, one of which I still have and which is alive and well and slowly changing into the adult plumage and getting the golden forehead of maturity; I kept a keen look-out for any other sort of Parrot, but saw none. These little birds are quite common in the Magaliesberg, north of Pretoria, and most days, while there, I saw what were evidently family parties of five or six individuals; they do not seem to go in larger flocks, and are only found where there are plenty of trees. The Boers often keep these small Parrots as well as one of the Glossy Starlings, these being the only species I saw in captivity. There should be no difficulty in getting some of these Parrots imported, and I can assure members of the Society that they are most desirable little birds with very engaging manners and a great deal of character. The bird I have now lived in Mafeking for some months loose about a house, and slept on the foot of one of the servants' beds every night.

Another little bird I noticed in Boshof (O.F.S.) was the Red-headed Finch (*Amadina erythrocephala*). Round the windows of the Dutch Church in Boshof were some dozens of mud-nests, built in the style of our familiar House-Martin by a little Black and White Swift, which very much resembles the House-Martin. Numbers of these nests were appropriated by the Finches, and I often noticed them visit the yard where I was staying, to get feathers for upholstery purposes. I did not see them making any nests for themselves, so I presume they found the eviction plan, worked on the unfortunate Swifts, answered better and was less bother. I saw no Red-headed Finches in the Transvaal, although I kept a careful look-out for them.

In the Magaliesberg I saw numbers of the Grey Waxbill

and the Cordon Bleu,* and nearly every time I went through the thick bush country between Zeerust and Rustenberg I noticed some of the rare Violet-eared Waxbills. The two former generally visit farm yards and gardens, but the Violet-eared I usually noticed in the bush itself. I have written to my brother, who is in Pretoria, and hope he will some day be able to send some Violet-ears, etc., home to me.

Of the many Weavers, the Yellow-shouldered (*Sitagra capensis*) is ubiquitous; every little pond where reeds or willows or long grass grow has its colony, and in the breeding season the males are very conspicuous in their bright black and yellow dress as they chase each other slowly with their extraordinary flapping flight, like that of a large weak-flying moth. The Red Caffre-fink (*Pyromelana oryx*) inhabits the same sort of places and has just the same manners and customs. I saw their purse-shaped nests in hundreds along the Marico River, and they were feeding in the oat-fields after the breeding-season in the fashion of Sparrows at home. They also looked very much like Sparrows at that time of the year.

All round Kimberley, and to the east of the railway line between that town and Mafeking, there were great numbers of the White-browed Weaver (*Ploceipasser mahali*).

This bird has quite different habits to the two preceding species. It builds an untidy sparrow-like nest of grass, with very little weaving in it. I have never found them except in acacia-thorn trees, and generally at a good distance from water. Dr. Butler, I think, in his notes on South African birds, accuses it of a sweet song; it certainly has a song, lots of it, in fact it never seems to stop, but every other note of sweetness is preceded by that whizzy noise mixed up with an imitation of a heavy chain being shaken violently, that all Weavers seem to delight in; this song it starts well before dawn, and as for quarrelling—. I once got into camp after dark, and after my supper wrapped a kaross round me and lay down under some acacia- or wait-a-bit thorns, full of nests of the White-browed Weaver. This was during the

* This would be *Estrilda angolensis*, the species without the crimson ear patch. Figured Vol. I. New Series, p. 120.—ED.

breeding season. They kept me awake half the night talking to each other or swearing at me, I don't know which; and, as soon as it got grey dawn, a pair, locked together and fighting like bull-terriers, fell with a thump and a flutter near by, and went at it hammer and tongs, making the feathers fairly fly. When nearly exhausted they flew off, only to be imitated by various other pairs of combatants. I doubt if I have ever met a more quarrelsome little bird.

The Sociable Weaver Bird (*Philæterus socius*) I saw breeding once, a nest about the size of half an average haystack, riddled with holes, out of which the birds were swarming as we passed. The tree was a big acacia-thorn and I had no time to investigate it. I saw another nest the following year, on the top of which the Boers had hidden very nearly two tons of maize and pumpkins. When I reached it it had been set on fire by some zealous yeomen, it being part of their duty to destroy any food supply of the enemy. As this was not the breeding time no great harm was done, but while I watched it burn a snake came tumbling out of it, to be quickly followed by another, so that birds'-nesting in Africa is not without its risks.

The Long-tailed Whydah (*Chera progne*) is to be seen everywhere, and the male bird with his peculiar floating flight always reminded me of the males of the Red and the Yellow Caffrefink, to which of course he is nearly related. There is no reason why *C. progne* should not be freely imported; in the Western Transvaal there must be thousands and thousands. Some days, on an eight-hour march, there was never a minute when there were not at least half a dozen in sight.

In some parts of the Magaliesberg another sort of Whydah occurred, a sort of fawn-coloured bird with two very long pin-wire-like tail feathers. He is not shown in Dr. Butler's "Foreign Finches in Captivity," but I saw a nice specimen in the Western Aviary in the Zoo a few weeks ago. In these same mountains I often saw a bird which I now know to be the Pied Babbling Thrush (*Crateropus bicolor*); it had the same sort of habits as the "Seven Sisters" of India; about a dozen get into a bush and make a fearful racket, and, at the last minute, when you are a few

feet off, tumble out of it and go off, looking as if they had only just learnt how to fly.

A bird that seemed to be quite as attractive as the well-known Shamah of India was the Cape Robin (*Cossypha caffra*). It was very familiar in the Colony, and I found a nest on a drawing-room mantelpiece of a deserted house. The hen bird sat on her eggs until I almost touched her. This species struck me as being a near relation of the Shamah and the male is very handsome.

I saw in the bush-veldt plenty of the large Black and White South African Long-tailed Shrike (*Urolestes melanoleucus*); they always went in parties of six to eight, and sat on some vantage ground like the top of a high tree, and answered each other with a loud and penetrating note.

The lovely Natal Bush-Shrike (*Laniarius quadricolor*) I only saw once: it looked like a spot of flame in the tree and was busily engaged in mobbing a Pearl-spotted Owl (*Glaucidium perlatum*).

The Backbakiri (*Laniarius gutturalis*), a very handsome pale green bird with a yellow bib edged with black in the male, was exceedingly common everywhere that there was a bit of plantation, and their loud ringing call of five notes, two of which are uttered by the male and three by the female, but so run into one another that you could almost swear it is one bird, can be heard at Cape Town and every station almost to Mafeking.

If a fire started in the grass among the bushes the African Drongo usually turned up in force to have a good feed off the unfortunate insects that were obliged to move; they were very often accompanied by the South African Roller.

Although the Wattled Starling (*Dilophus carunculatus*) was said to be very numerous, I never met with it, but I believe it only turns up in certain years. The Common Spree (*Spreo bicolor*) which looks just like a Common Starling with white vest and under-tail coverts is enormously common. It nests in holes in banks and such like places and roosts out of the breeding season, like our Starling, in reed-beds. The Cape Glossy Starling (*Amydrus morio*) I found nesting in holes in a rocky

cavern on the Malmain River; I had to swim through another small cave first, which was tenanted by scores of loathsome bats, which smelt abominably and flew into my hair in their fright, and then came to a large cavern in which I got a nest of this bird as well as a couple of just fledged Speckled Pigeons (*Columba phæonota*).

These Pigeons are very easy to tame. At a German missionary's I saw a small flock that had complete liberty and were nesting in boxes under the verandah roof just like tame Pigeons. The missionary told me he had pies of the young squabs at frequent intervals.

A very nice little bird, quite common near Mafeking, and also near Kimberley, was one of the Finch-Larks; the species I was not quite certain of and cartridges were too expensive to waste on birds of its size, but dozens could quite easily be caught. The Cape Long-Claw (*Macronyx capensis*), like a Lark with a yellow bib and a cry like a young kitten, was common everywhere in the Colony.

The Cape Dove (*Ena capensis*) and the Cape Turtle-Dove (*Turtur capicola*) are to be found in every cattle-kraal in the country. In Cape Colony I have seen the latter in dozens.

One species of Hemipode, with a breast spotted like a Thrush, is not uncommon between Zeerust and Mafeking; probably it is *Turnix hottentotta*. I have often seen it flushed by a screen of scouts several times; each time it flew a shorter distance and finally squatted; and once I put my hat over a squatting bird and examined it before turning it loose. The first bird I saw looked like a sport or variety of the Common Quail which I was out shooting at the time. They look quite a light cream colour when flying, and I was very disappointed when I shot it and recognised it.

The only other birds I got of interest were three young Pearl-Spotted Owlets (*Glaucidium perlatum*). A native found them in the downy stage in a hole of a tree, and gave them to me. I fed them on locusts, grasshoppers and bits of birds, and finally gave them to the Pretoria Zoological Gardens, where I believe they all died from a surfeit of raw meat.

MORE ATTEMPTS TO BREED THE TAMBOURINE DOVE.

By A. G. BUTLER, Ph.D.

In a paper published in the Magazine for October, 1903, pp. 397—399, I recorded some unsuccessful efforts to breed *Tympanistria*, both in and out of doors; the only result attained being the construction of nests and production of infertile eggs in the bird-room. I now have to note a slight advance in the programme, resulting in the hatching and partial rearing of one nestling.

At the end of September I thought it wise to catch my Doves and restore them to their indoor aviaries, a task which, with some little personal mishaps, I safely accomplished.

Within a week the Tambourine Doves were quite reconciled to the change from their freer life, and began to examine their old nest-basket; shortly afterwards the cock bird resumed its song, which I had never once heard whilst it was in the open,* and by about the 23rd of October the first egg^o was laid, and the birds began to take turns upon the nest as in the summer. On the 10th of November I found the chipped half of an egg-shell upon the floor, and knew that a youngster must have been hatched. For three days the hen only left the nest for a hurried meal once or twice in the day, the cock being almost equally attentive, but sitting partly on the edge of the nest-basket, partly over the hen.

Whether the combined attentions of both parents were too overpowering for the young Dove, or whether they were more anxious to keep it warm than to feed it regularly I cannot say; but, on the morning of the 19th both parents had left the nest, and showed no inclination to return to it; therefore I examined the nest, in which I found one partly feathered youngster and an addled egg.

* *Hoo, hoo, hoo, hoo, hoo-hoo-hoo-hoo-hoo-hoo, ug-gug-gug-uggle, uggie, uggie*, is a vague representation of it; the hoo is repeated more and more rapidly until it becomes a mere guttural rattle.—A. G. B.

As I do not consider it probable that the young of the Tambourine Dove at the age of nine days has hitherto been described, I think it may be interesting to describe it:—The skin, where not feathered, is of an ash-grey colour, the crown of the head sparsely covered with straggling sandy-coloured hairs, the neck and sides of breast below clothed with half-developed whity-brown downy feathers, those of the breast with broad ill-defined subterminal blackish transverse bands; the flanking feathers of the abdomen are also downy, but pure white; all the feathers of the wings and tail are of a bright coffee-brown colour with broad subterminal irregular transverse black bands; the bill is black with bone-yellowish tip; the feet dark horn brown, becoming almost black on the toes; the claws reddish horn-colour. I was too late to note the colour of the iris.

In the description of the immature young in the Museum Catalogue the only approach to the above colouring is in the secondaries, which are said to have rufous bands towards the tips; I think therefore that this very early plumage, which, though less sandy in aspect, vaguely reminds one of Pallas' Sand-Grouse, may have some significance as an indication of the ancestral colouring of the Doves: Mr. Seth-Smith tells me that the same general appearance occurs in the very young nestlings of other species; and, even in a much more developed nestling of *Phlogœnas* sent to me by Miss Alderson, there is an indication of subterminal dusky transverse bars on the brown-tipped steel-bluish feathers of the upper parts.

I believe my Doves are contemplating another attempt now, which will, it is to be hoped, be more satisfactory; but in any case each phase of the plumage of this or any other bird when described, is one further detail added to the life-history of the species, and therefore not time wasted.*

* The doves sat steadily for about six days, and then I found a broken egg on the floor: on examining the nest I discovered nothing therein.—A. G. B.

FOREIGN BIRDS AT THE DECEMBER BIRD-SHOW AT THE CRYSTAL PALACE.

The recent Bird-show, held on the 8th, 9th, and 10th of December, is a new institution as far as the Crystal Palace is concerned, and it certainly gives promise of eclipsing the older established shows, held in the Autumn and early Spring. The December Show was held by the London Cage Bird Association, the National British Bird and Mule Club, and the Foreign Bird Club, and to the latter body belongs the credit of having made the Foreign Bird Section what it was—the best collection that has been brought together at the Crystal Palace for the last three or four years; and I may here remark that the compliment paid by the Council of the F. B. C. in sending free passes to the Members of the Council of the Avicultural Society was much appreciated.

The Judging of the Foreign Section was done by very experienced aviculturists, and the general opinion seems to be that it could hardly have been carried out better than it was. Space only permits of our mentioning the most notable exhibits in the Foreign Classes.

Amongst the Parrakeets, Mr. Hawkins' fine pair of Varied Lorikeets obtained first prize, the second going to a good pair of Kings. Mr. Hamlyn sent a good specimen of the rare Red-collared Lorikeet (*Trichoglossus rubritorques*), Mr. Hawkins' a Tui (*Brotogeris tui*), Messrs. Thwaites and Lloyd a Rock Pepler or Black-tailed Parrakeet (*Polytelis melanura*), and Mr. Osbaldeston a Malabar Parrakeet (*Palæornis peristerodes*), a species seldom seen. There were several other good birds in this Class.

Dr. Lister sent his Banksian Cockatoo, but it did not look so well as at the last Show.

The Class for Doves and Quails was a failure, only three lots being present, though there were eleven entries. The only birds worth noticing were a pair of Wonga Wonga Pigeons belonging to Mr. Housden, but they were hardly in Show form and were sent in an unsuitable cage.

The Weaver Class contained a specimen of the rare *Ploceus megarhynchus*, sent by Mr. E. W. Harper.

In the Class for the rarer Waxbills and Grassfinches, Mr. L. W. Hawkins, as usual, showed the best birds, amongst which may be mentioned a Vinaceous or Masked Fire-finch (*Lagonosticta vinacea* or *L. larvata*),* a Spotted Fire-finch (*L. rufopicta*), and a pair of Black-rumped Finches (*Stictoptera annulosa*). Mr. Osbaldeston sent a pair of Parrot-finches (*Erythrura psittacea*), and a fine Crimson-finch (*Neochmia phaeton*). There were several pairs of Masked, Long-tailed, Rufous-tailed, and Gouldian-finches.

Messrs. Thwaites and Lloyd sent their Indian Crested Bunting (*Melophus melanicterus*), and Mr. Boswell Frostick a fine pair of Desert Trumpeter Bullfinches (*Erythrospiza githaginea*).

The Class for Tanagers, Sugar-birds, and Zosterops was well filled, the most notable birds being a Magpie Tanager (*Cissopis leveriana*) sent by Mr. Theobald, a Tri-colour (*Calliste tricolor*), a Yellow (*C. flava*), and another which nobody seems to be able to identify, † shown by Mr. Townsend. Mr. Osbaldeston sent a Blue and Black Tanager, Mr. Swan a White-capped Tanager. Two Blue Sugar-birds (*Dacnis cayana*), a cock and hen, sent by Mr. Hawkins and Mr. Swan respectively.

The Class for Crows, Pies, Starlings, etc., contained a Bobolink, a Hunting Cissa, Purple-headed and Green Glossy Starlings, an Andaman Starling, and a fine pair of Blue-bearded Jays.

The Class for Hybrids consisted of three exhibits, the only birds worthy of note being a very interesting pair of hybrid Parrakeets, bred from a Redrump and a Rosella. They were exceedingly beautiful birds, showing much more of the Redrump

* I am not certain which species this is, but I may state that these little Fire-finches are more often imported than is generally supposed; I once picked out six from a lot of common Firefinches in a dealer's shop. A hen of this species was shown by Mr. Franz as a hen "Australian Fire-finch."

† This bird is the same that appeared at the October Show, which, in my notes in this journal last month I said looked like *Tanagra palmarum*. In the much better light at the recent Show however, it was evident that it did not belong to this species, and I think it is more likely to prove to be either *T. cana* or *T. cyanoptera*.

than of the Rosella. It would be interesting and instructive to know if this pair of hybrids would breed.

The Class for Insectivorous and Fruit-eating Birds not elsewhere provided for contained an interesting collection. Mr. Fyfield sent a Touraco, Mr. Osbaldeston a Green-billed Toucan, Mr. Townsend a Hardwicke's *Chloropsis* and a Blue-cheeked Barbet, Messrs. Thwaites and Lloyd a Waxwing, and Mr. B. Frostick a male *Turdus fumigatus*. D. S.-S.

THE MARTINETA TINAMOU BREEDING IN CAPTIVITY: POLYANDRY IN BIRDS.

This beautiful crested Tinamou, scientifically known as *Calodromus*, *Calopezus*, or *Eudromia elegans*, inhabits Western Argentina and Patagonia. The Zoological Society has possessed it on many occasions, and it has bred in the Gardens two or three times. I am not aware, however, of any complete account of the nidification of the species having been published in this country, but in the *Bulletin de la Société Nationale d'Acclimatation de France* for October, 1903 (for a copy of which I am indebted to our Honorary Member, Dr. P. L. Sclater) appears a detailed account by M. Dulaurier, of the nesting of this species in his aviaries. He tells us that most of those imported arrive in bad condition, and it is difficult to acclimatise them; but after several fruitless attempts he at last obtained some. To keep them in good health the author found that it was important to give them plenty of green food such as young grass and groundsel. During the Spring the male frequently uttered his piercing cry of two or three notes; he also became very excited, following the hen and keeping an eye on the shelter, under which she layed her eggs, and covering them carefully after each laying. He alone undertook incubation and the rearing of the young.

M. Dulaurier commenced with a single pair, but so many

eggs were laid that it was found necessary to give the first twelve or fifteen to a domestic hen, the remainder being left with the male Tinamou. The hen did not sit well, and several died when young.

In the Spring of 1903, M. Dulaurier tried two males to the one female, and he considers that three might have been better still, as the female lays a fresh clutch to each male.

At first the two cocks fought and pursued the hen who laid thirteen eggs, but neither of the males would sit, and the eggs when placed under a domestic hen were found to be clear. One male was then removed, and the hen paired with the other and laid six eggs, upon which he immediately commenced to sit. The hen was then allowed to be with the other cock, and laid another clutch of eight eggs, but this cock was disturbed by some Tragopans and did not hatch.

We are told that the young Tinamous can be reared in the same way as young Pheasants.

The fact of the female pairing successively with two males seems to me to be of very great interest. The subject of Polyandry in birds appears to have been somewhat neglected by ornithologists, but I am much disposed to think that it may take place more often than is supposed in species, in which the *male* performs the duties of incubation and the rearing of the young.*

In an account I gave of the breeding of *Turnix tanki* (*Bulletin of the B. O. Club*. Vol. XIII. p. 72), I remarked that the female, after laying her clutch of three eggs, took no further notice of the nest, but went about "apparently in search of another husband." I am much inclined to believe that had there been another male available she would have paired with him and laid a second clutch, which he would have incubated. I have noticed moreover in the case of the Tataupa Tinamou (*Crypturus tataupa*), that when the male is sitting the female often calls. She is not wanted any more for the first clutch, and it seems probable that she would, if she could, go off and find a second

* Dr. Sclater tells me that the Rheas are known to be polyandrous.—D. S.-S.

mate, to whom she would lay a second clutch of eggs, which he would proceed to incubate. At any rate M. Dulaurier has shown that *Calopezus elegans* is polyandrous in captivity at least, and the subject is one that ought to be taken up by aviculturists.

D. SETH-SMITH.

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

By FRANK FINN, B.A., F.Z.S.

The additions for the month of November have been few, and none of them are new to the collection. They are as follows :

Nov. 3rd.	2 Yellow-billed Cardinals, <i>Paroaria capitata</i> .	..	Chili.
„ 4th.	2 Meyer's Parrots, <i>Poeocephalus meyeri</i> .	..	S. E. Africa.
„ 12th.	2 Common Mynahs, <i>Acridotheres tristis</i> .	..	India.
„ 17th.	1 Rosella Parrakeet, <i>Platycercus eximius</i> .	..	Australia.
„ 23rd.	1 Bonelli's Eagle, <i>Nisaëtus fasciatus</i> .	..	Europe.
„ „	1 Common Buzzard, <i>Buteo vulgaris</i> .	..	British Isles.
„ „	1 Yellow-fronted Amazon, <i>Chrysotis ochrocephala</i> .		Guiana.
„ 25th.	1 Lesser Sulphur-crested Cockatoo, <i>Cacatua sulphurea</i> .		Moluccas.

The six young Black Swans hatched at the end of last month are mostly still alive and doing well ; a marvellous instance of the hardiness of this species, considering that the parent pair, which hatched two young (which were lost) in the middle of April, have only a small ungrassed paddock and a mere round basin of a pond. The Black Swan evidently shares the adaptability to confinement so characteristic of Australian birds as a whole.

RING-NECKED PARRAKEETS AT LARGE IN HAMPSHIRE.

The following very interesting story of a pair of Ring-necked Parrakeets (*Palæornis torquata*) is the substance of a lecture delivered in Lancashire by the Rev. H. P. EDGE, Rector of Stratfield Turgiss, in Hampshire.¹ It was printed in the *Hants. and Berks. Gazette*, of September 12th, 1903, and has been brought to our notice by the President of this Society, who has obtained the Author's permission for its publication in the *Avicultural Magazine*.

"Since the pair in my possession became mine they have never had an hour's illness. They are 'never sick,' and 'never sorry,' are 'as hardy as Pigeons,' as 'docile as dogs,' and as faithful as Jonathan. During the inclement weather experienced in January last they were housed in a thatched coach-house, and were as serene and joyous in their surroundings as they are in the month of June, when at liberty, and free to roam wherever they choose. Their food consists of hemp seed, sunflower seed, melon seed, fruit, soaked bread, etc., but under no circumstances is animal food permitted. The subjects of this paper were about two months old when I bought them. Though I have had them, now, for more than five years, I have not seen the cock drink water more than half-a-dozen times, and then only on hot, sultry days. The hen frequently drinks in the summer time, and occasionally has a bath—which is provided for her—but I have never yet seen the cock bird perform any ablutions in a bath, and yet the plumage of both is perfect—as close and as glossy as that of any game cock in 'fighting feather.' It has been suggested that they bathe in the river 'Loddon' close by. I question it. In showery weather, however, they perform the most fantastic evolutions in the trees. First depending from a spray by one claw, they then spread out their tails and wings to receive the moisture, very much after the fashion of Fantail Pigeons, though the fashion of the Parrots is decidedly more graceful.

"By the way. I have a picture before me of one of these Parrakeets holding a morsel of food in his right claw. A friend observed to me, two years ago, that some writer on the habits of birds had stated that the Parrot tribe rarely or never used the right claw to convey food to the beak. After being supplied with this piece of information, I have narrowly watched my two birds, and never yet seen them utilize their right claws. The left are invariably used.

"In the summer after my return from India in 1898, the cock and hen were placed in a large, though roughly constructed cage, which was unfortunately, in the day time, placed in the open air, and, at night, as a rule relegated to a coach-house which has a thatched roof. One morning a hue and cry was raised that the cock had escaped from his quarters and

was flying about in the drive. The whole of that day was spent in endeavouring to coax him back, but without avail, and he spent the night in the trees. Next morning, however, owing to the pangs of hunger, he allowed himself to be caught, and returned to his domicile. Shortly after this a friend of mine came to stay at Turgiss who persuaded me to let both birds out of the cage, in order that they might exercise in the open. They disported themselves for some time in the trees near the house and then betook themselves to some elms in the glebe, keeping up a continual screeching until nightfall—obdurate to all blandishments. Then bedtime came, and with it—no end of self-reproaches for my temerity in granting them their freedom. About four o'clock next morning, however, I heard their well known cries in the garden, and to make a long story short, after the whole strength of the establishment had been enlisted, they were decoyed into 'sanctum.' After this, they were allowed their liberty once or twice a week—little difficulty being experienced in securing them in the evening. At length in June 1899 they were suffered to roam at their own sweet will, without being caged at all, until the end of the following October. They slept sometimes in an apple tree, sometimes in a chestnut, but most frequently in one of the elms, and I noticed they never chose the same tree for two successive nights.

“During the period of four months' absolute liberty, they presented themselves regularly, about 6 o'clock every morning, at a certain window, where food was always awaiting them. They were fed again at 10.30, in one of the fir trees, and then finally for the day at 5.30. At first, when unconditional liberty was accorded them, they confined their attention to the garden and the drive; but, by degrees they cultivated a more extensive knowledge of their surroundings—flying sometimes for a distance of four or five miles, but always returning home about 5.30 in the evening.

“At the end of October, 1899, chiefly because shooting is in full swing for the following month, they were recaged, and not suffered to roam again until the Spring of 1900.

“Their daily habits, at this juncture, are much as follows. They are fed in their cages, which stand in a coach-house, about 8 o'clock in the morning. At 10 o'clock they are released. Directly the cage doors are open they exercise for about 10 minutes—flying very often at a great height in the air, and at a great speed: then after swooping down, in a graceful manner, on to one of the trees, they come to me for half-an-hour's chat, or indulge in a little love making.

“They have unlimited space at their disposal—twenty acres of glebe, a large area of arable and grass land, and a noble park in which is some of the finest timber in England, 'and nobody says them nay.' I have heard it said that the flight of the Parrot is swifter than that of any other bird. Having daily opportunities, at this season, of comparing the flight of my

birds with that of Pigeons, Martins, Swifts and Hawks, I unhesitatingly say that the four species just enumerated are 'not in it.' The Parrots 'have it' by a long chalk. They are not accustomed to keep on the wing for any great length of time; but they go at an astonishing rate, and 'chatter all the way.' In clear, cold weather, they rise to great heights—quite as lofty as that at which the Swifts ordinarily fly—and then make for a certain point. The cock and hen fly close together.

"Though the birds in my possession are fully paired, and admirable friends when at liberty, yet experience proves that it is undesirable for them to occupy the same cage. Consequently they have separate cages. There is ample and exalted precedent for all this. The fact is the cock is somewhat tyrannical. He keeps his 'Missus' in first-rate order. Outside he is a perfect angel.

"One of the prettiest sights is to see the cock feeding the hen. This takes place either on the grass or on the branch of a tree. The prelude to the fact is exceedingly graceful. First the cock advances toward his mate, and retires, then again an advance is made, and then a retrograde movement, and, then, arching his neck above that of his wife, the two beaks are united.

"I have never taken much pains to make my 'specimens' accomplished linguists. The conditions under which they are kept preclude their becoming apt orators, though both of them do "orate." If you want a Parrot to become a great talker, you must keep him in a small cage, and cover him up a good deal, until he has learnt the lesson you are desirous of instilling. So with Canaries and other song birds, I believe. But I am quite content with them as they are. Oddly enough, however, the hen is a more proficient linguist than the cock. Sometimes she will sit on the branch of a tree or the sill of a window—looking at herself in a glass—and repeat, with evident satisfaction, all the short sentences she has ever learnt.

"Half a mile from my house my Churchwarden and his wife and family reside. My feathered friends are very fond of visiting at Yew Tree Cottage; in fact, when the cock and hen have exceeded their ordinary time for roosting, I always charge the former with 'gallivanting with Mrs. Taylor.' Well, there is always a plentiful supply of fruit at this house in the summer, and in the autumn a plethora of holly berries and haws, to both of which they are partial. One day I called at Yew Tree Cottage, in company with 'Bill,' a fine bull terrier. We had been preceded by the two Parrots which were busily employed in devouring holly berries. Directly Bill and I appeared on the scene down flew the cock-bird at my feet from the holly bush, and looking up in my face in a sagacious manner, exclaimed twice, 'Well, here's old Bill!' He never used the expression before, and has never used it since.

“There is one question with which I am invariably confronted, after chronicling their habits, and it is this—‘Don’t the other birds molest them when they are out of doors?’ When first they were at liberty, they were often pursued by Starlings, Chaffinches, and, of course, Sparrows, although their most persistent persecutors were a pair of Barbary Doves, which bred in the fir trees, but now not a single bird resents their introduction to North Hants. Nay, some of the song birds, such as Blackbirds and others, such as Starlings, offer them distinct adulation; if it be that ‘imitation is the sincerest flattery.’ I have heard a Starling imitate their cries to such a nicety that, for a moment, I have been deceived. A Blackbird last year imitated them, too, with such good effect that both the cottagers and the children observed the fact. All birds imitate more or less and I think that ornithologists will agree with me when I say that Thrushes, for instance, in districts where the Nightingale abounds, catch, to a large extent, the notes of that songster, and that hence the song of a Hampshire Thrush is possessed of greater volume and sweetness than that of a Lancashire Thrush.

“These Parrots of mine readily make friends with those for whom I have affection, and as readily avoid those whom I don’t care about. For some they have a distinct aversion. I know of one lad in particular whom they can’t abide at any price. Directly he appears they set up a discordant note, and flee away, terrified. Strange to say, my two dogs can’t endure him either.

“‘Jack’ and ‘Jill’—for those are their names—though strangely enough I never address them by their names—have little or no fear. For cats they have the most supreme contempt. I once saw them feeding off a plate on the lawn with three cats, and, when probably those quadrupeds displayed a vulgar greed, drive them all away.

“I have two of the finest bull terriers in England—a dog and a bitch—‘Bill’ and ‘Loo.’ Both these Parrots have a fond admiration for ‘Bill.’ They will fly on to his back—which is permitted, but when they proceed to examine his toes, ‘Bill’ is a little resentful. By the way, ‘Bill’ is very jealous of them.

“These birds may be said never to appear to better advantage than when rollicking in an apple or gambolling in a plum tree at the beginning of September, but the spectacle ‘after the feast’ is such as to evoke strong language from even the most pious and patient of gardeners. Not content with my own apple trees, like children, they ‘think everybody else’s bread is better than their own,’ and persist in paying flying visits to all the orchards round, and devouring, or rather wasting the fruit. It speaks volumes for the kind forbearance of my neighbours when I add that never yet have they been ill-treated, and but seldom interfered with. The question of acclimatization, therefore, is an open one. They are delightful

pets, but terrible marauders, and their introduction in large numbers into England might be a curse and not a blessing.

“A number of Cockatoos were turned out in a park in Hampshire some years ago, and the project proved successful, but they were all shot, eventually, by first one Cockney sportsman and then another.

“My Parrots will fly after me along the roads, and across the fields, for a couple of miles and more—now hovering above my head, now flying on to my shoulders, now on to an oak tree, now on to a fence, then on to the ground at my feet—chattering all the time. Last October, in company with a friend, I called upon the Vicar of a neighbouring parish, who lives two miles distant from me. Our homeward journey lay through a beautiful copse—‘Cattle Copse’—where are ‘cedar and pine and fir’ and ‘branching’ hawthorn, the deciduous trees at that time gorgeous in autumn attire. All at once, if you please, out flew the two birds from a hawthorn bush where they had been feeding. They had no doubt followed my friend and me—unknown to us—for a couple of miles, and were awaiting our return. Mutual salutations over, they then accompanied us home—now on our heads and shoulders, then at our feet. Sometimes they would allow us to get ahead for some distance and then enjoy the fun of catching us up.

“At the beginning of last February they visited a neighbouring Rectory—a few miles off. Having entertained the school children, who were enjoying their dinner time, for half an hour or so, they started for Turgiss. I happened to be walking by a footpath, through some fields, midway between my house and that which the Parrots had been visiting, when, all at once, I heard the well-known chatter. There, at a great height in the air were the Parrots. They recognized me and the bull terriers at once, and then made the most delightful swoop down, and settled—one on my right and the other on my left shoulder.

“Between Rectory and Church twenty acres of glebe and two large fields intervene. On a Sunday morning, after service is over, they are almost invariably holding sentinel in one of the trees which surround the house. Directly I pass through a wicket gate, they are ‘ware of it’ and fly to meet me, across the glebe, in an abandonment of delight.

“Some naturalists have been of opinion, I believe, that birds have a sixth sense. The probability is illustrated in this way. A camel dies in the desert. No Vulture was near when the death struggle took place, but the body of the poor creature is not long without company. Presently a dot is observed in the sky. This gradually comes nearer and nearer and proves to be a Vulture. Well it is argued that it is highly improbable that the bird could either see or smell the carcass of the camel, and that hence there is some undiscovered sense peculiar to birds. Now if I go away from home for a day or two, and return late in the evening, these birds

know perfectly well that I have returned long before they either see or hear me the following morning. I know that they are cognizant of my return by the peculiar noise they make. It is said that the sense of smell in Parrots is accentuated. Well it may be, but I hardly think this is the solution. It is impossible that they can see through half-a-dozen brick walls—unless, as Mr. Samuel Weller said at the famous trial, they had a magnifying glass of extra million power. I am inclined to think that there is something in this ‘sixth sense.’

“Of course it goes without saying that their five years’ sojourn in Hampshire has not been without vicissitudes. On one occasion, they had flown about three miles from my house, and were resting on the branches of a tree. Three men, who were working near, were endeavouring to catch them, when, fortunately, a friend of mine happened to be passing on his bicycle and observed what was being done. Leaving his machine in the road, he went to the men and rebuked them. They desisted, and Jack and Jill reached home in safety.

“A duplicate of this affair was enacted close to our Church a month or two after what has just been related transpired. Three strange workmen were uniting their efforts to catch them, when a parishioner at work in a neighbouring field took in the situation, left his work, and expostulated with the would-be poachers. To their credit, be it said, they relinquished their intentions, and again Jack and Jill flew home once more.

“During the summer of 1902, there were many indications that my birds would set up house-keeping. Again, so early in the season as the beginning of March last year, everything pointed in that direction. The hen tried two or three times to make her way into the thatch which covers the barn, but the project has so far been abandoned.*

“More than once, I have been asked—‘Do you ever carry anything about with you, in order to induce these birds to follow you?’ In Paris—I have never seen the sight in London—I have often seen in one of the squares there half-a-dozen Sparrows settle on the arm of a man, and evince no fear. Some people will tell you that the man has something in his pocket by which he attracts the birds, as rats are attracted by oil of aniseed. I do not believe it for a moment. I certainly do carry one commodity but only one, and that is love—‘and perfect love that casteth out fear’—but I carry nothing else. It is all comprehended in that word.”

* If Mr. Edge were to have some suitable nesting boxes or hollow logs fastened up in the trees the birds frequent, there is little doubt that the Parrakeets would breed successfully, and a brood of young Ring-necks, reared in the open, would be a delightful sight.—ED.

CORRESPONDENCE, NOTES, ETC.

AVIARIES BELONGING TO LADY DUNLEATH.

SIR,—It may interest some of your readers to hear some account of the past year's nesting season in my outdoor aviary. When I left for Scotland on August 19th the following birds all had nests and were sitting in the bushes outside the building. A pair of Golden-breasted or Zebra Waxbills. The young ones were just hatched when I left and now three young ones are flying about, pictures of perfect health and plumage.

In the first nest of Cordon Bleus there were four young ones, but one wet night they were all drowned. After I left they built again, hanging their nest, made of dry grass, to the four fronds of a common fern. They brought out two young ones, one of which died last week. The other is very well and just beginning to show the cock's red patch on its cheeks.

The Orange-cheeked Waxbills also made a nest and brought out some young. I can't tell exactly how many as they were hatched after I left home. I think there must have been three.

The Common Grey African Waxbill built under a stump on the ground; the nest was just like a ball made of fine grass and lined with feathers—it was almost impossible to find the opening. They reared three or four, but again I cannot tell the exact number. My man saw the young birds of both of these nests after they began to fly, but did not count them.

I have also ten young Saffron Finches flying about, several Zebra Finches, and two young Bullfinches, the parents being a German cock and English hen. The young ones, both cocks, are magnificent.

My Nicobar Pigeons, which I have had for four years, adopted a young Grey Ring-necked Dove two or three days after it was hatched, drove away the parents and brought it up. About the same time they made a rough nest (which they had never done before) of sticks and laid one egg. They did not sit on it, but adopted the Dove instead. I put the egg under a common Pigeon, hoping it would hatch, but it was clear.

My pair of Red-headed Gouldian Finches hatched, in October, two young ones in a travelling box cage which was hanging on a branch. Just as they were beginning to feather, a Half-moon Parrakeet got in, pulled both out and killed them; it was most unlucky, he must have slipped in unnoticed through the door.

I think that in spite of the wet summer I have, reason to be satisfied.

I have now brought in and put in the conservatory aviary for the winter, one pair Scarlet Tanagers, one Green Bulbul, two Gouldian Finches, four Cordon Bleus, and a Pin-tailed Nonpareil; the latter is now in most glorious plumage, having moulted perfectly outside. I got him in Paris last March and he has been out ever since, but I did not know whether he would

stand our winter. Next year I hope to be able to give a more accurate account of the young birds as I have recently entered in a book every bird I have, and mean to enter all purchases, sales, and deaths, so that there can be no doubt in future as to the number of young birds reared. I enclose a list of my birds, but if it makes this letter too long, pray omit it.* Outside in the Park I have one Rhea, one Common European Crane, and one Flamingo. These are out all the winter and are shut in only at night in their shed. I should feel much obliged if any of your readers could advise me where to get Flamingoes and their probable price.

N. L. F. DUNLEATH.

SPONGE-CAKE FOR INSECTIVOROUS BIRDS.

SIR,—Will you be so good as to tell me your opinion of ordinary sponge-cake as a food for soft food eating birds? I have several birds: White-cheeked Bulbuls, Pekin Robins, etc., that have been fed for some time on a mixture of bread, biscuit, preserved egg, ants' eggs and dried flies, equal parts, of which they ate a considerable amount, but lately I moved them into another aviary where, amongst others, were some Tanagers which were supplied with sponge-cake; now they will eat nothing but the sponge-cake so long as there is any, and if there is enough they do not touch the other mixture. Do you think that the sponge-cake alone is sufficiently nourishing for them (with a little fruit) or ought I to remove the sponge-cake and so make them eat the other? At present I have removed the Tanagers and give them a little sponge-cake. Also is sponge-cake with fruit a sufficient diet for the Superb Tanager? it was what I was recommended, and I have never seen it touch the other food.

RICHARD H. WILMOT.

The following reply was sent to Mr. Wilmot:

I believe that sponge-cake or Madeira cake is excellent, as a change, for Insectivorous birds.

This food should contain a large proportion of egg, which is generally regarded as the most important item in foods for insect-eating birds; but, as a matter of fact, I believe that the colouring of sponge and Madeira cakes is largely due to saffron.

It is certain that Insectivorous birds are not much affected by the absence of ants' eggs or dried flies from their food; for I have tested them for six months at a time, when ants' eggs have been scarce in the market; but to deprive them of egg would I believe soon be fatal, unless something equally nutritious could be substituted.

Therefore, as the quantity of egg in these cakes is doubtful, I should advise you to give, both to your Tanagers and the other birds, either Grade

* We have not room to print the list, but it includes about 180 birds.—RD.

of "Century Food" or its equivalent, and only to give the cake as an occasional treat. My Tanagers feed chiefly upon fruit, but they do take a certain quantity daily of the soft food: they are not large eaters.

A. G. BUTLER.

HYBRID;—NUTMEG FINCH × SILVER BILL.

SIR,—For the past three years I have kept Silver Bills, Zebra Finches, Nuns and similar small birds practically in a wild state, they having access to a flight of over 100 ft. long, about 50 ft. wide, and 12 ft. high, with plenty of growing shrubs and fruit trees to nest in.

Along with these smaller birds I keep a few large ones, such as Cardinals, Virginian Nightingales, Tanagers, &c., and have found in this sized aviary that the larger birds do not molest the smaller ones, but allow them to breed freely, and I have successfully reared nest after nest without trouble; and even now as I write (November 7) I have two nests of young Zebra Finches in the open (nests in peach trees growing against a wall), while another young brood of four are flying about fed by their parents.

In July last my stock of Nutmeg Finches dwindled down to one cock bird, owing chiefly I believe to their getting into my fish-ponds for a bath and being drowned. I noticed that this single bird appeared to be on very friendly terms with the Silver Bills, but thought nothing of it until I saw him apparently feeding young in a Silver Bill's nest; and, to my delight, shortly afterwards I saw three young birds flying about which were certainly a cross between the Nutmeg and a Silver Bill.

Not having heard that such a cross had been obtained before, I wrote to our Honorary Secretary on the subject, and at his request now submit particulars of the young birds. Their general appearance and actions are very similar to those of the Silver Bill, but with the markings and colours of the Nutmeg distinct upon their forehead, chin, throat, and foreneck, while the beak is neither so light in colour as the Silver Bill's, nor so dark as the Nutmeg Finch's.

The Nutmeg markings continue right along under the wings, getting more distinct over the lower part of the back and rump; while the tail feathers, instead of partaking of the golden-bronze colour of the Nutmeg, have turned to almost a jet black since the moult.

In size the hybrids are rather larger than a Silver Bill, but stouter in body and build; while the one I have before me now has one pure white feather among the primaries of the left wing; the eyes are slightly larger and bolder than the Silver Bill's. *

H. B. RABBICH.

* Is not this a new hybrid?—R. P.

WHAT TANAGER?

What is a small Tanager I bought in Genoa the other day? The size of a Superb Tanager but slimmer, blue crown, and Venetian-red cheeks and nape; body, &c., green.

HUBERT D. ASTLEY.

The following reply has been sent to Mr. Astley:

I should think there can be little doubt that your bird is the Festive Tanager (*Calliste festiva*): the lesser wing-coverts are said to have a slight orange bar across the tips which you do not mention, but your bird may be a female, which is a little duller in colouring than the male.

A. G. BUTLER.

REARING YOUNG SAFFRON- AND RIBBON-FINCHES.

The following reply has been sent to a Correspondent in reply to a query:

I have always found the best food for Saffron-finches when breeding to be crumb of stale household bread 2 parts, crushed sweet biscuit 1 part, yolk of egg and ants' eggs, of each 1 part, slightly damped.

I reared Ribbon-finches (Cutthroats) without trouble upon Abrahams' Insectivorous bird-food without any admixture: they threw one young one out of nests which contained uneven numbers; but probably these were dead before they were removed.

A. G. BUTLER.

THE GREY-WINGED OUZEL: COVERING SINGING BIRDS:
THE CALCUTTA ZOO.

SIR,—I was very interested to see* that a Grey-winged Ouzel had been imported safely to this country. I know these birds well in Kashmir, where they breed almost on the snow-line. I bought one in Srinagar, paying nearly the equivalent of a sovereign for it, a large price, but it is extremely difficult to get natives to part with a good singing-bird or a talking Mynah.

The bird I bought was in a small dome-shaped wicker cage, covered up with a cloth, and sang beautifully. Nearly everything is done by Easterns the opposite way to Europeans. Here we *cover* a cage to stop a bird singing, there they *uncover* the cage to stop singing. Later on, however, I put the bird in a large cage which was never covered, and he sang beautifully. I took him to India from Kashmir; and during the lovely "winter" in the North West Provinces, which is warmer than any days we have had this summer in England, the bird never sang a note and seemed to feel the cold. I took him to Calcutta when we went there, and during the hot weather—and it was desperately hot—the bird sang without ceasing from 5 a.m. till 6 p.m.

The native who had him before me fed him entirely on sattoo, which

* See p. 57.

is a species of powdered hemp I think, mixed with ghee (clarified butter). This was squashed into a small jar about three inches high and was of the consistency of soft cheese, and was only renewed *once a week*. The bird was in lovely feather and as fat as could be, although he did not eat as much as a Robin. I fed him on chenna, ghee, bread crumbs, an occasional scrap of banana and shreds of meat, and earthworms; and his particular delicacy was to be given one of the enormous snails which abound in Fort William, Calcutta: he would spend the whole day digging it out. The bird was very tame.

I gave him away to the Calcutta Zoo, on leaving India, and he was very well the last time I heard of him. He fed very freely while with me, and drank and bathed a lot.

The curious custom of keeping singing-birds in the dark seems universal in India. A friend of mine had the best singing Shâma I ever heard. He had had it for years, and during the first few years it was never uncovered. One day, however, the cover was accidentally left off, and he found the bird singing hard, so after that the poor little fellow sang in the sunshine instead of the darkness.

You will hardly credit it but my friend assured me that this Shâma was fed *exclusively* on lice. An old native came daily with a tin of these awful vermin, not only for this bird but for various other Shâmas in the big houses round.

I wish I had brought a Grey-winged Ouzel home. In case any of your readers should think of sending for one or two, please note that it is called "Kostura" in the East. They are the loudest and most varied "Whistlers" of any bird I know.

The Calcutta Zoo. is a splendidly run place. The bird aviaries are lovely, all of them with a large circular outside flight, grass, running water, stones and trees.

The baboo in charge is a most interesting and highly educated man, and a very keen naturalist.* He has travelled he told me to nearly every Zoo. in Europe to pick up hints, and the result is that he is gradually making the Zoo. there as perfect as it is possible to be.

W. TWEEDIE.

THE SOUTHERN MIGRATION OF WAXWINGS.

SIR,—Since our Hon. Secretary's interesting article on the nesting of Waxwings in a British aviary, the North of Ireland has been visited by a large number of these handsome birds, and in fact their numbers this year have constituted a record migration so far as Ireland is concerned.

* Ram Brahma Sânyâl spent an evening at my House when in England and gave me a copy of his "Handbook": he is one of the most amiable men I have met.—A. G. B.

The earliest records I can get are from the "Irish Nationalist" of 1893, when six were shot, in 1894 one was shot and one caught alive, and in 1902 another bird was shot. This brings us up to date 1903.

In October one was shot near Lurgan.

Nov. 6—Two ♂	from Toomebridge.
" 12—One ♀	" Lurgan.
" 19—One ♂	" Rathungan.
" 28—Two ♂	" Antrim.
Dec. 2—One ♂	" Larne.
" 5—One ♀	" Lisburn.
" 5—One ♀	" Aghalee.
" 8—One ♀	" Whitehead.
" 10—One ♂ & One ♀	" Islandmagee.

A good number have also been seen in co. Galway.

This finishes the record up to the present of authenticated specimens, but I have heard from different sources that a great many have been seen feeding on haws and other berries. It is a pity they get such a warm reception of powder and shot, as, I am sorry to say, is the case with most rare birds visiting our shores.

W. H. WORKMAN,

AFRICAN FIREFINCHES BREEDING IN OUTDOOR AVIARY.

Referring to the Rev. C. D. Farrar's "Record" which was published in our October Number, at page 407, the following communication has been forwarded to us by our Member Mrs. Oswald Webber:—

The aviary has been formed by wiring in a portion of a verandah round my home in Yorkshire, on the south side. Beyond the protection afforded by the wall of the house and the roof of the verandah, it is quite open. The finches (African Firefinches) were turned in, to the best of my recollection, in the spring of 1889. Before long they built—as far as I can remember the nest was placed on a ledge in the roof, but how it was constructed I cannot remember.

I believe only one egg was laid, which was duly hatched, one young bird appearing, which flew about the aviary with its parents.

Towards autumn the three birds, one by one, disappeared, escaping through the meshes of the wire. The young one might have been about four months old.

T. WEBBER.

THE NILE SWALLOW-TAILED BEE-EATER.

Our Member Mr. Walter G. Percival, whose head-quarters at present are at Berber in the Sudan, under date 20th September, 1903, writes as follows:—

I picked up in the garden yesterday a Bee-eater in a very emaciated condition . . . it was alive and did not attempt to move, but died during the night. I have made a very rough outline of it and named the colours. The measurements are correct—natural size. Can you identify it!

WALTER G. PERCIVAL.

We are indebted to Captain Shelley, author of "The Birds of Africa," for the following reply:

The bird is *Dicrocercus furcatus* (Cat. B.M. XVII. p. 42). Here Sharpe recognises two species. Reichenow (Vög. Afr., II., p. 315) separates the West African form as *D. chrysolaimus* (Jard. & Selby).

I have to invent English names for nearly all the African species. A good generic name for the three species is "Swallow-tailed Bee-eaters"; and for the specific name I would suggest the prefix of Nile, Senegal, and Natal, thus:

D. furcatus = Nile Swallow-tailed Bee-eater.

D. chrysolaimus = Senegal Swallow-tailed Bee-eater.

D. hirundineus = Natal Swallow-tailed Bee-eater.

The two northern forms are distinguished from *D. hirundineus* by the blue forehead, but to indicate this character would make the English name too long.

G. E. SHELLEY.

THE INFLUENCE OF DIET ON THE AVIAN DEATH-RATE.

In the last number of this Magazine we stated that this discussion must close, and we do not intend to reopen it; as, however, our note at the foot of Dr. Creswell's letter may have been rather misleading, we publish the following extract from a letter received from that gentleman:

The point I emphasize is not so much that "yolk of egg is infected by septic bacilli more readily than most substances," (although this is probably true), as that *when infected, and when at the same time exposed to the high temperature of a bird's organism, it renders the descendants of the original infecting bacilli more active in throwing out their special toxins and therefore more virulent and deadly than those which are commonly met with apart from the influence of egg food.*

Dr. Creswell also asks us to correct a printer's error in his last letter (P. 80, line 30): instead of "Seeing that neither of my pathologist friends," read "Seeing that neither any of my pathologist friends," &c.

THE COUNCIL OF THE SOCIETY.

SIR,—Last month I desired to thank those members who were good enough to elect me to the Council, and to make known to them that owing to circumstances beyond my control I felt obliged with considerable regret to resign. I find that it was not possible for you to publish the letter I wrote to that effect, and so take this opportunity of conveying my thanks and apologies to those who voted for me.

W. GEO. CRESWELL.

POST MORTEM EXAMINATIONS.

RULES.

Each bird must be forwarded, as soon after death as possible, carefully packed and postage paid, direct to Mr. ARTHUR GILL, M.R.C.V.S., Veterinary Establishment, Bexley Heath, Kent, and must be accompanied by a letter containing the fullest particulars of the case. Domestic poultry, pigeons, and Canaries cannot be dealt with. If a reply by post is required a fee of 2/6 must be enclosed.

- PARROT FINCH, cock (Mr. Pickard). [Pneumonia of long standing caused death].
- BUDGERIGAR (Mrs C. H. Williams). [Bird died of acute congestion of the lungs].
- QUAIL (Master Cuthbertson). [Concussion of the brain from a direct injury caused death].
- ZOSTEROPS (Mr. J. C. Baker). [Pneumonia was cause of death. It was a cock].
- TWO WHITE JAVA SPARROWS (Mr. Ogle). [Both birds died of acute pneumonia].
- JAVA SPARROW (Miss Furneaux). [Your bird was killed by some other bird I think. There was a wound on left side of head in which situation the skull was fractured. It may have been the Java, but I should watch the Cardinal].
- TWO BULLFINCHS, cock and hen (Miss Parsons). [Both birds died in consequence of pressure on the brain caused by blood clot from a ruptured blood vessel. You do not mention what you fed them on so cannot with certainty say the cause].
- PHEASANT AND BLUE AND BLACK TANGER (Mrs. Noble). [Pheasant died of liver disease. The Tanager of apoplexy].
- NONPARREIL (Mr. Rycroft). [Apoplexy. You give no particulars of feeding so cannot advise you as to the cause].
- GREEN BULBUL (Lady Carnegie). [Bird had diseased liver and had suffered from chronic indigestion with malassimilation as a consequence. The muscular tissues being considerably wasted. The immediate cause of death was heart failure no doubt increased by fright through being caught].
- HEN GOULDIAN FINCH (Mrs. Johnstone). [You do not definitely say what the food is. This bird was much emaciated and died from exhaustion from malassimilation, caused by chronic indigestion].
- HEN REDRUMP PARRAKEET (Mrs. Williams). [I should suggest giving the seeds mixed, as if they are particularly fond of either they are likely to eat very little one day and over eat when their favourite food is given them. Your bird died of apoplexy].
- GREEN AVADAVAT (Miss Appleton). [Am sorry I was quite unable to make an examination of bird as it was completely crushed in the post].
- HEN GOULDIAN AND CUTTHROAT, (Captain W. Tweedie). [Bird died of exhaustion consequent on malassimilation. She was quite a bag of bones. I have not had much experience in keeping these birds for any time, but have seen grass seeds and rock salt recommended. There seems to be a something requisite for these birds that is not usually supplied to them in confinement, as I get many of them sent me for examination in this very emaciated condition. The Cutthroat had a fit, which was the cause of her paralysis. She died of starvation. There was not a particle of food in her. Your aviary affords quite sufficient protection for such hardy birds as this and the others you mention. Thanks for kind remarks, I am always pleased to assist the members].
- NIGHT HERON, cock (Mr. J. L. BONHOTE). [The bird's liver and abdominal glands were much enlarged with tuberculous deposit. I do not remember seeing a worse case].
- AVADAVAT (Mr. Moore). [Concussion of brain caused death. There were no signs of enteric].
- AMHERST PHEASANT, cock (Miss Parsons). [Bird died of inflammation of the bowels. I should give a greater variety of grain and seeds].
- WHITE JAVA SPARROW (The Countess of Harewood). [Bird died of apoplexy. There was no grit of any kind in the gizzard and the whole grains of millet, had passed a considerable distance down the bowel without the slightest alteration in shape so they were not digested at all].
- RUFICAUDA FINCH (Mr. Mason). [The bird died of acute enteritis].
- ST. HELENA WAXBILL (Captain B. R. Horsburgh). [Apoplexy was cause of death. Bird was very fat].
- BULLFINCH, hen (Mr. N. S. O'Reilly). [The bird died of fractured skull. The left eye was dislocated and the feathers above this eye were removed which gives me the idea it must have flown very hard against the wires, and the beak gone through so the eyes received the impact. I should watch any doubtful birds as the back of skull was knocked in which might have been caused by another bird before death ensued from injury described].
- PILEATED FINCH (Miss West). [Broncho pneumonia was cause of death].
- SPICE BIRD (Mrs. Robertson). [Your bird had an apoplectic fit just before losing use of legs. as the old blood clot was to be seen. The pressure of this on the brain caused paralysis; another similar fit was cause of death].
- ZEBRA DOVE (Miss Ivens). [Jaundice was the cause of death].

SPECIAL NOTE.—Would members kindly note that I can only undertake to make *post mortems* on birds which are intact, and I really cannot undertake skinning or forwarding birds after examination, as my time is limited.

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"Mr. Watkins, who must have spent a vast deal of time in the study of Tennyson's poetry from the natural history point of view, publishes a number of extracts, and enlarges on them in a most interesting manner. Mr. Watkins' book should prove very acceptable to Tennyson lovers."—*The Yorkshire Post.*

"'The Birds of Tennyson' should have a strong attraction, for its well-written pages are a powerful proof of the great influence exercised upon the impressionable mind of the poet by the beauties of form and the joyous songs of the feathered kingdom. There is another class of readers who should also find much pleasure in a perusal of the volume—those lovers of Tennyson as a poet who, not taking any special thought about birds, will be astonished to find how much their favourite poet knew about them and how narrowly he observed the life that moved about him. They will find, too, by the aid of Mr. Watkins' comments as an expert, how appropriately Tennyson employed his innumerable references to birds of all kinds, and especially song birds. Excellent illustrations by G. E. Lodge enhance the value of the volume."—*The Shrewsbury Chronicle.*

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(Continued on opposite page).

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(Continued on page iii. of cover)





W. Woodcock
1903

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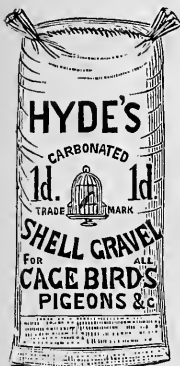
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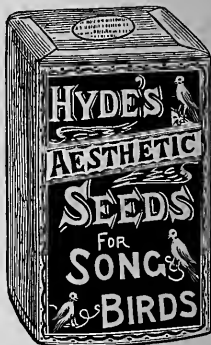
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FEBRUARY, 1904.

GUILDING'S AMAZON PARROT.

Chrysotis guildingi.

By the Honble. and Rev. Canon DUTTON.

I have been asked to write a short notice to accompany the plate of Guilding's Amazon, and so I tell what I have been able to gather.

I have wished to have one ever since first making the species' acquaintance at the Zoo, but more on account of its rarity than for any charm the bird exhibited beyond that of beauty. To my way of thinking, and I expect I am not singular, for every one who sees mine leaves the other birds to admire it, it is the most beautiful, as it is the most distinctive of all the Amazons. The browns, the yellows, and the blues of the wing make a superb combination of colour, and the black is singularly soft in its effect. One asks oneself *why* has one particular Amazon departed from the universal green of the family to adopt brown and yellow in the place of green and red? Is the colouring of the island of St. Vincent, where alone this bird is found, such as to make brown and yellow protective there? The island of St. Lucia has its own special Amazon; Dominica has two, but they do not abandon the green foundation of the family plumage.

The plate makes it unnecessary to describe the bird's colouring, but I may as well give the dimensions from the British Museum Catalogue; which are, Total length about 17 inches, wing 10.6, tail 6.4, bill 1.5. From this it will be seen that it is

the next largest Amazon to *Augusta*, whose length is given as 19 inches. It is considerably larger than *Versicolor*, though the length of that is 16.5 inches. The tail, it will be seen, is rather long in proportion to the bird.

The size of the bird is a drawback to it as a pet, as it must have an unusually large cage, but that does not much matter, as it is not a bird one often can acquire.

And, indeed, now after the eruptions in St. Vincent, every one who possesses one says, "Mine is the last of its species." I know of five "last of their species." One in the Zoo, one belonging to a lady, my own, and two in the island of St. Vincent. I had an opportunity of buying one two or three years ago, but its character was not attractive, and I let it pass into the hands of Mr. Jamrach.

But the eruption took place since then. If I was to have it at all, I must "hurry up," and being told that a lady wanted to sell one which talked, and was "tame and attractive," I bought him.

His linguistic attainments were not asserted to be more than "Maud," "Mother," and "Margaret." I can't say that I ever heard him say even these, but my parlour-maid stoutly averred that one morning he greeted her with "Hullo, Joseph!" which is his name. Nor can I say that with me he has been "tame and attractive." He sits in a morose lump all day, hardly eating, and only occasionally climbing about his cage. He gives one the impression of a bird on its way to become nocturnal, for he does his eating at night. He cares for nothing special, except perhaps sponge cake soaked in tea, which he has at five o'clock, but even that he does not eat with the greed the *Versicolor* and Blue-faced Amazons show. And only for that one moment in the day does he lay aside his readiness to "go for" me. He won't look at a peanut; and apples, which I was told he liked, he hardly ever touches. But I rather think he is a bird of marked character, and that he will not forgive being separated from his mistress.

She told me she had had him five years: that these birds are shot with cork, which stuns without injuring them, and

that the native who brought this to her said he had never seen one in such young plumage. She also told me that he had been devoted to a small Amazon which one day poisoned itself with parsley, and that he moped so after its death that she had the greatest difficulty in coaxing him to eat. That he loved his liberty (with a cut wing) in the garden, and was very destructive to the orange trees. He seems to me to feel cold, so he can't have his liberty at present, and if he is not going to make friends, I don't see how he ever is to have it.

He was fond of his mistress, made friends with the English cook, and was devoted to a black servant. I should have supposed that he declined to make friends with a man, but he shows no signs of caring for my parlour-maid. I can only suppose that his heart has been so often "torn with partings" that he now declines to let it take root any more. He does not care twopence for the *Versicolor* or the Blue-fronted Amazon, is tolerant of the Blossom-heads and a Grey, and was only roused by a Blue-bonnet. That did really rouse him to fury. He dashed at the bars of his cage nearest it, and dashed towards me whenever I approached his cage. And curiously enough, its presence caused him to go nearer sounds like speech than he ever uttered before or since. Whether he supposed it to be a hawk or what, I don't know, but he never got reconciled to its presence. He is said to be afraid of children, but I have not brought any to see him. It is rather singular that the "last of its species" belonging to a lady in London shows the most unmeasured terror at the sight of a child. She tells me its eyes start out of its head, it gasps for breath, and that you can hear its heart beat. That one was at first morose, but has taken the most dog-like devotion to her, though still savage to all the world beside.

Of the two "last of their species" still remaining in St. Vincent, I am told one, belonging to Mr. Frazer who was himself destroyed by the eruption, talks, and that the other is a good talker. So I suppose they *can* talk. The "last of its species" in the Zoo seems to me as morose as mine, which is however a much finer bird. But if these birds are never reared from the nest, but only obtained by shooting, there is some excuse for

moroseness. Yet the *Augusta* I had, which was obtained in that way and is now in the Zoo, is the most friendly of birds, and learnt to talk readily.

However there is one set-off—*Versicolor*, though devoted to me, won't learn a word, and is intolerably noisy. Guilding's, at least, is silent, and hardly ever makes a sound.

If he ever should determine to make a friend of me, perhaps he might do great things. One can always conquer Grey Parrots and Amazons—at any rate of the larger kinds—by soundly cuffing them. But I don't want to make the bird *afraid* to bite me, but glad to see me. So I still wait. Let us hope that "*tout vient à point à qui sait attendre*" will come true in this case.

A RAMBLE IN CEYLON.

By RUSSELL HUMPHRYS.

It is 6 a.m. and a typical July morning as we emerge from the rest-house at Kaltura, and finding a dilapidated trap previously ordered in readiness, we prepare ourselves for an exceedingly uncomfortable journey. Our destination is a patch of jungle some eight miles away, and our equipment consists of a butterfly net, collecting box, and a pair of powerful field glasses. For the first few miles all goes well, the road being excellent, and passing through the most luxuriant tropical scenery, the eccentricities of our native driver and his antiquated quadruped pass unheeded, but on leaving the main road and striking up a rough bullock path towards the scene of our intended operations, the entire absence of springs combined with a seat consisting of a plank of banana wood necessitates a halt, and we proceed on foot leaving our Jehu delighted at the idea of spending his day after his own fashion, under the friendly shade of a cocoa-nut palm.

As we tramp along the side of a large paddy swamp alive with various aquatic birds, numerous White Egrets (*Herodias alba* ?) are observed usually associating in small flocks of from ten to fifteen; they are wary, and the ground being devoid of cover we are not allowed a very close inspection. Yellow

Bitterns (*Ardetta sinensis*) and Chestnut Bitterns (*Ardetta cinnamomea*) are also plentiful, and a single Purple Heron (*Ardea manillensis*) was flushed by our Cingalese attendant. On a broken bough overhanging a tank a pair of White-breasted Kingfishers (*Halcyon smyrnensis*) were on the look out for their breakfast, and a little Blue Kingfisher (*Alcedo ispida*) was hovering over the water, his plumage glistening in the sunshine like some strange jewel. As we leave the paddy swamp and strike a native track into the bush, a Red-vented Bulbul (*Molpastes hæmorrhous*) flits across our path uttering shrill notes of alarm, and after a short search a fully fledged young bird is discovered. The bait is tempting and a hot chase ensues, which ends unsuccessfully from our point of view. Violent exercise in a temperature of one hundred and something in the shade is not conducive to good temper; so smothered in insects of all sorts and descriptions and prostrated by the heat, we call a halt and seek solace in a whiff of tobacco. A few moments later we hear again the musical notes of *M. hæmorrhous* and the plaintiff call of their hungry offspring, and are witness to an exciting chase by both old birds of a particularly fine example of *Pompeoptera criton**, a most beautiful butterfly of black and golden hue. For perhaps thirty seconds the issue hangs in the balance, but the combined efforts of the parent birds are eventually successful and *P. criton* is brought fluttering to the ground. But such a large and luscious mouthful is not to be disposed of in a moment, and ere the *coup-de-grâce* is administered the tables are turned, a large green net appears upon the scene, a contingency evidently quite unexpected as, with crest erected and uttering loud cries of indignation, the cock bird endeavours to escape with his prize still struggling in his beak. But the warning cries of his spouse and young, combined with the close proximity of the green net, cannot be ignored, so with a final note expressive of the most supreme anger the prize is dropped and subsequently transferred, luckily practically uninjured, to our collecting box, much to the delight of our Cingalese attendant, who had suffered more or less severely conjointly with the writer in the pursuit of "Red-vent junior."

* Probably *P. darsiüs*; *P. criton* inhabits the islands of Batchian and Gilolo.—A. G. B.

Our glasses are now employed carefully searching the neighbouring trees, with the result that numerous tiny Sun-birds (*Arachnechthra minima*) are discovered busily employed searching the palm leaves for minute insects—a somewhat similar Sun-bird but larger, we take to be *A. ceylonica*; both species were plentiful and quite easy to approach. A familiar cage bird in the English bird market is the Green Bulbul (*Chloropsis jerdoni*), here we observe him at home amidst natural surroundings, and very beautiful he is. His bright grass green plumage matches so closely the surrounding foliage as to render detection very difficult. Another species we observed in this locality was the Black-capped Bulbul (*Pycnonotus melanicterus*) a bird entered in our field notes as the Black-crested Yellow Bulbul (*Otocompsa flaviventris*); to an untutored eye the similarity between the two birds a short distance away is our excuse for the error. Several examples of the latter bird have been in our possession at different times, but as Oates and Blanford make no reference to the occurrence of this bird in Ceylon we conclude it must have been the former species. Another Bulbul observed, of a dull olive green plumage, was not identified; we noted it as being possibly *P. luteolus*.

As we emerge from thick bush into a clearing a Drongo (*Dicrurus ater*) is sitting motionless on a rotting palm stump, swooping down at intervals to return with some insect to his perch, and there devour it at his leisure. It being now mid-day and our collecting box more than half full, we select this spot as a suitable halting ground and prepare to refresh the inner man, and afterwards enjoy a short siesta as far as mosquitoes and flies innumerable will allow.

Reader, during the interval, and while the remainder of our little expedition are enjoying a well earned repose, we will borrow the winged sandals of Perseus and journey some hundred and fifty miles to the hills inland, and alighting in the neighbourhood of the Botanical Gardens at Peradeniya, at an altitude of some 1600 to 1700 feet above sea level, continue our wanderings.

A Green Fruit Pigeon (*Crocopus chlorogaster*) flashes across

our path, and we hear his companions cooing on all sides. A pair of Spotted Doves (*Turtur suratensis*) are flushed beneath a clump of giant bamboo, and we catch a glimpse of a small bird of brilliant black and yellow plumage, but it is not identified. A family of Wood Swallows (*Artamus fuscus*) have taken possession of a dead bough and sit huddled together uttering their peculiar plaintive call; occasionally one of their number takes a short flight in pursuit of some insect, but always returns to nestle close up to his companions. Here for the first time we note the active little Ceylonese Loriculet (*Loriculus indicus*) associating in small flocks of from eight to a dozen birds; they are very busy and very noisy, climbing about the tops of the palm trees. We note that these birds evince a marked partiality for the higher forest trees.

On the smaller flowering shrubs we notice numerous nests of the Ceylon Munia (*Munia kelaarti*) but the ones examined were empty; they were untidy structures composed of dried grass, not unlike the nest of the Tree Sparrow (*Passer montanus*), and from the fact that the birds were busy building again we concluded that we were too early for eggs, or else like the Sparrow they nest consistently for three or four months of the year, repairing the old nest each time a fresh clutch is laid. In an area of some thirty square yards upwards of a dozen nests were discovered, and from the fact that the Nutmeg bird (*Munia punctularia*) was noticed to be equally busy carrying about nesting material, and quite as excited when the nests were examined, it is possible that the large untidy bundles were the joint efforts of both species. Another small bird that we noticed plentiful in the locality was the Ceylon White-eye (*Zosterops ceylonensis*), in its movements closely resembling a small Titmouse busily searching for minute insects.

As we scramble down a steep bank towards the river a soft mellow note, strangely familiar, greets our ears; we "cudgel" our brains, where have we heard that note before? Visions of the Western Aviary at Regent's Park rise before us, and we have it—a Barbet,—but although we search diligently we cannot discover the bird who must have been close at hand,

for we heard him utter his hoarse guttural notes of alarm, and a few moments afterwards the call is repeated in the distance.

Along the river bank we note the Bee-eater (*Merops viridis*) plentiful in this particular locality; and a Drongo who, on being disturbed, displays a conspicuous white rump, we conclude to be *Dicrurus leucopygialis*. Close to the banks of the river where the vegetation was thickest a dull brown Warbler was plentiful; it was not identified and only seen in this particular locality. The Ceylon Grackle (*Eulabes ptilogenys*) was also fairly numerous, and afforded a welcome contrast to the ubiquitous Common Mynah (*Acridotheres melanosternus*) who was *en evidence* everywhere.

As the afternoon is now far advanced, and twilight in the tropics of short duration, we will by the aid of our sandals, transfer ourselves back to the camp, and prepare for the return journey to Kaltura. A Cingalese brings into camp a young Snake Eaglet (*Spilornis melanotis*) sewn up in a native basket, its head protruding from one end, its legs, tied tightly together, from the other. It was subsequently liberated, placed in an improvised cage and fed on scalded raw meat and insects. In a few days it regained the use of its legs and improved rapidly, and when last seen was on its way to join a collection formed by an enthusiastic planter on a hill station.

Soon we leave the jungle-clad hills behind, and repress the paddy swamps on whose placid surface the rising moon is already casting a silvery sheen, the Egrets and Bitterns have vanished, Night-jars fly noiselessly overhead, and the bull frogs are awakening. A few miles farther and we hear again the dull roar of the surf ceaselessly beating the palm-fringed shore, and know that we have nearly completed our journey. The soft notes of the Dyal Bird (*Copsychus saularis*) are not yet stilled, and a pair of Brahminy Kites (*Haliastur indus*) are hawking along the water's edge as we enter the rest-house very tired and very dirty, but our collecting box is full and our hearts have been gladdened by the sight of such bird life as does not fall to our lot every day, so after a bath and substantial meal we smoke the pipe of peace with all mankind.

THE MALABAR THRUSH.*

By Miss FITZ-GERALD.

The Malabar Thrush, or, as it is now commonly called, The Idle or Whistling Schoolboy, inhabits the Nilgiri Hills in Madras, and is a remarkably handsome and interesting bird, only a little larger than the English Blackbird, and of a dark blue-black all over, excepting the forehead and wing-butts, which are a light cobalt blue. Its nest is made of dry thin roots and grass, and is generally built on ledges and in dark caves near little mountain streams, as its food consists of snails, land crabs, and tadpoles, which inhabit shady and damp spots; and thus it can obtain a livelihood more easily.

The Idle Schoolboy's whistle is very human, in fact it is exceedingly like that of an idle schoolboy wandering through the woods whistling no particular tune. I have heard some people assert that its whistle is like that of an organ, very rich and mellow, but this I cannot vouch for.

The young birds are very difficult to rear, being very delicate, and require to be fed on worms, land crabs, and tadpoles. The only person I have ever known who has reared them is a coffee planter in the Nilgiris, where these birds are numerous; and he taught them to whistle tunes beautifully with the help of a flageolet; among other tunes he taught them "Merrily danced the Quaker's wife" and "Ehren on the Rhine," which they whistled very well, much to the astonishment of everyone.

He has taken a great deal of trouble with these birds; and I believe, when they were quite young, he had to sit up several nights with them to keep them alive.

In the early rains up here (Ootacamund, Madras Presidency), if you walk along any wooded road or path, you will hear the Idle Schoolboys singing all around.

* Horsfield's or The Malabar Whistling-bird, *Myiophonus horsfieldi*, the "Whistling Tom" of p. 184 of Vol. VII. of our Magazine. Since writing that page, I have satisfied myself that Whistling Tom is not *M. temmincki*, as I then thought possible, but Miss Fitz-Gerald's bird, *M. horsfieldi*.—R. P.



PECTORAL FINCH. ♂
(Munia pectoralis).

THE PECTORAL OR WHITE-BREADED FINCH.

Munia pectoralis.

This handsome Australian Mannikin, although it has been known amongst us for several years now, seems to be surrounded by a certain amount of confusion in the minds of many aviculturists as well as bird dealers.

This species and the Chestnut-breasted Finch are often confounded together though they do not bear very much resemblance to one another. Even at the Zoological Gardens, where one expects the animals to be correctly named at least, a pair of *Munia pectoralis* which have been placed with some Parson-finches in the Insect-house are labelled as "Chestnut-breasted

finches (*Donacola castaneithorax*).”* It is to be hoped therefore, that the cut here given, although the attitude is none too characteristic, will enable those of our members who do not know the species to identify it without any trouble.

The Pectoral or White-breasted Finch is an illustration of the extent to which some Australian species, practically unknown a few years ago, have recently been imported comparatively freely. When Volume XIII. of the *British Museum Catalogue* was written in 1890, this species was represented in the National Collection by one skin only. In May 1896 a single specimen was exhibited at a bird-show in Brighton, and this was probably the first time that this species was exhibited alive in this country, and marks the commencement of its career as a subject for British aviculturists. Since these first examples appeared these birds have continued to come over, though only in small numbers and at varying intervals. The present writer has possessed altogether some six or eight specimens, but it is curious that all except one appear to have been males, this sex being apparently much more numerously imported than the other.

These birds appear to be hardy and easily kept in health on a diet of canary and millet seed, though grass in flower is appreciated and should be supplied when obtainable. I am not aware of any case of this species breeding in captivity being on record, though I have seen the pair I now possess carrying bits of grass in their bills, which may indicate the possibility of a nest at some future date, if all goes well. I must confess that I have found these birds uninteresting even for Mannikins; they are, as a rule, shy birds, and when any one is in sight they hide away in the thickest cover they can find. They apparently possess no song whatever.

Gould gives no notes regarding the habits of this species in a wild state, for it was only known to him, and first described by him, from two skins procured by Mr. E. Ding of the “Beagle.” The Calvert Expedition to the North West in 1896-7, met with a few of these birds, which were shy and difficult to approach. In

* I may here mention that a Parrot-finch (*Erythrura psittacea*) in the Parrot-house has been labelled as *Erythrura prasina*.

the Appendix of his book *Nests and Eggs of Australian Birds*, Mr. A. J. Campbell writes :—"The eggs are long ovals in shape ; texture fine ; surface without gloss ; colour white, with the faintest bluish tinge. A pair from a clutch of four, taken by Mr. G. A. Keartland, in North-west Australia, measures in inches : (1) $\cdot 62 \times \cdot 43$, (2) $\cdot 6 \times \cdot 42$. The nest was the usual flask-shaped structure of grass, lined inside with finer material, and was situated in a bush about ten feet from the ground. Date, end of February, 1897."

Munia pectoralis appears to be confined to the North-West of Australia, and it is noteworthy that several species from this out-of-the-way region have recently come into the English Bird-market ; I may mention *Ptilosclera versicolor*, *Platycercus browni*, and *Trichoglossus rubritorques*.

The Pectoral Finch may be thus described : *Adult male*. Upper parts lavender-grey, the wings rather more brownish and spotted with white ; the tail blackish brown ; throat, cheeks and ear coverts black with a purple sheen, and speckled with minute white feathers, on the chest a band of black feathers, very broadly tipped with white, so that the black is hardly visible ; a line of pale vinaceous buff from the eyes runs down the side of the neck ; underparts vinaceous buff, the sides being ornamented with white spots, each spot being edged with a fine black line above and below ; under tail-coverts more or less spotted with white ; bill lead-colour. The *adult female* resembles the male except that the black on the breast shows more distinctly, the white spots being much smaller.

D. SETH-SMITH.

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

The recorded additions to the Gardens for the month of December 1903 are extremely few, though one is well worthy of special notice.

DEC. 8th.	1	Tytler's Parrakeet (<i>Palzornis tyleri</i>),	..	Andaman Islands.
„	11th.	1 Panama Curassou (<i>Crax panamensis</i>), ♀	..	Panama.
		2 Scarlet Tanagers (<i>Ramphocelus brasilius</i>), ♀ ♀		Brazil.
„	31st.	1 Water Rail (<i>Rallus aquaticus</i>),	..	British Isles.

Tytler's, or the Andaman, Parrakeet is confined to the Andaman Islands where, according to Hume, it is very numerous. It is very closely allied to the Nicobar Parrakeet (*P. nicobarica*), and very possibly specimens may have been previously imported but mistaken for that species. The example now at the Gardens is recorded as new to the collection.

(See also page 145).

NESTING NOTES ON THE AFRICAN SILVERBILL.

During May, 1902, I had my first aviary built. Nothing happened beyond a pair of Long-tailed Grassfinches making nests in various places, without the least idea of laying in them. The rest of my birds consisted of a cock Bearded Reedling, and the survivors of one dozen mixed foreign finches, which are nearly all hens except two cock Silverbills.

After bringing my birds indoors for the winter, I exchanged one of the Silverbills for a hen. On December 22nd I found two broken eggs had been thrown out of the sleeping box on to the floor of the cage which contained these birds. The hen continued to lay until September 28th, except when rearing young, and began laying again on November 26th, and another egg on the 30th, so now she has laid in every month throughout the year except October.

While in a cage the birds have never succeeded in hatching a single egg. They would sit for a day or two and then let the eggs get cold. There was a young bird nearly ready to hatch on February 16th, the day on which I had to take them back to East Hoathly. Plenty of cuttle-bone, old mortar, and pounded-up uncooked egg shell was supplied, but the eggs were very brittle and the yolk could be seen from any part of the shell. The birds were very timid, especially the cock, who used to dash in and out of the nest-box and make little holes with his claws in the eggs, spoiling nearly all.

I could find nothing much about the actual nesting of this species in any of my books, except that the usual clutch of eggs seems to be six or seven. During their aviary life they did better but wasted a large number of eggs, and only reared three young birds.

Towards the end of the season I discovered their mode of nesting. The hen laid two eggs on consecutive days and incubated them immediately. This I found out during their cage life. After an interval of four or five days she laid two more eggs, and probably more later on. I have seen both young birds and eggs in the nest together, but they have disappeared sooner or later. When the most forward birds have left the nest, never more than

two in my case, what might have been others are only dried up eggs or dead birds, owing probably to their heavier and older companions having trampled them to death.

The last brood consisted of one bird, which left the nest on the 15th of September, and a much younger bird, which I did not discover until the 16th, with only the tail and wing-feathers just showing. It must have hatched out later than the first bird, probably from the second pair of eggs. I found it when cleaning out the nest-box, after the others had flown. The parents seemed to forget it after that, and the next morning I found it dead in the nest, probably from cold as there was plenty of food in the crop.

Observations were not easy to take, because I had other birds nesting close by at the same time.

The chief reason of their not rearing more was, I think, the dirty state into which their nests got. Some of them seemed to leave the nest before they could fly properly, and died from exposure during the nights of last summer. I lost a brood of Long-tailed Grassfinches through a dirty nest. I pulled all the hay out of their second nest, when the young were about half grown, and left the parents to reline it, which they did, and all went well. But these birds are not so timid as the African Silverbill.

H. L. SICH.

BENGALESE AS CAGE-BIRDS.

Of Bengalese in the aviary my experience has been small, my birds having been kept almost entirely in cages, where their quaint little ways showed to great advantage.

During the spring and summer each pair occupied a separate cage, where they nested with more or less energy and success; and in the winter the cocks lived together in one large flight cage, and the hens in another. They were the smallest birds I possessed at that time, and their white colouring and gentle ways made them seem too fragile to rough it in the aviary among stronger birds.

When Bengalese first arrive in this country they seem rather delicate: six I bought this summer all died within a few weeks, probably owing to the cold and damp, as four of them at least appeared to be quite healthy at first.

When once acclimatized they are fairly hardy, and a high temperature is not at all necessary to their well-being. My bird-room was between 45° and 55° in winter and the Bengalese, even in cages, were quite happy. An odd hen, who is still out in my garden aviary, looks bright and cheerful even when the grass outside is white with frost. Their habit of all crowding into one sleeping box at night must help to keep them warm. I have seen seven cocks pack themselves into one cocoanut shell night after night, although

a similar shell hung empty close by. The entrance hole was quite small, and when five birds were in it seemed impossible for the others to find room; but though it generally took them quite a quarter of an hour to get settled all were safely stowed away at last. I cannot think that any of them could have found room to move leg or wing all night.

It seemed to me that separating the cocks and hens during the winter, and giving them rather small sleeping boxes was the best way of preventing that bad habit to which Bengalese seem specially prone, viz., sitting in the nest box for a day or two at a time, with or without an egg as excuse. Birds that start the season with this failing never seem to lay a full clutch of eggs, or to sit steadily.

Another difficulty with Bengalese is to persuade them to eat soft food of any kind. I like all my birds to eat soft food occasionally, it is such a help in case of illness, and young Bengalese are all the better for it when first hatched. My birds seemed to feed their young ones on it almost entirely during the first week of their lives, and then they gradually decreased it in favour of white millet.

Bengalese make capital parents, and it is very seldom that a nestling dies. Four seems to be the usual number in the nest, though I have had as many as six. When newly hatched the young Bengalese is the tiniest little thing imaginable—a little pink moving morsel; it lies on its back with head and legs feebly waving, and it seems marvellous that its parents can manage to feed such a wee mite.

By putting together birds of different colours I have had chocolate and white, fawn and white, and pure white young ones in the same nest.

These notes have spun themselves out to such a length that I can only allude to the quaint little song and dance of the Bengalese, which are not the least of its attractions as a cage-bird.

EMILY BRAMPTON.

SIR CHARLES LAWES-WITTEWRONGE'S BLACK COCKATOOS.

In my account of the foreign birds at the Crystal Palace Bird Show (page 69), I mentioned the Banksian Cockatoo being a decided rarity, seldom seen at bird-shows. Soon after the appearance of these notes, however, I received a note from Mr. Hamlyn, the well-known dealer in live animals, informing me that a client of his at Chelsea had several of these birds flying loose in a large aviary and suggesting that I should go and see them, which through the courtesy of their owner, Sir Charles Lawes-Wittewronge, I have since had the pleasure of doing.

A large space outside Sir Charles' studio is wired over with strong

netting; there is a wooden structure, sadly gnawed about, for the birds to shelter in, and the ground is covered with rough grass. In this huge aviary are a number of Cockatoos, from the common Rose-breasted (*Cacatua roseicapilla*) to the rare Black Cockatoo of two or three species. When we entered this enclosure Sir Charles extended his arm and called, and down swooped the most magnificent Cockatoo I think I have ever seen, and alighted on its owner's shoulder. This was either the Great-billed Cockatoo (*Calyptorhynchus macrorhynchus*) or the Western Black Cockatoo (*C. stellatus*), the latter I am inclined to think. These Black Cockatoos seem to be some of the most affectionate of Parrots. This one was devoted to its owner, and allowed him to do anything with it, appearing never so happy as when allowed to be on his shoulder. I noticed also in this enclosure another which was evidently the Yellow-eared, or Funereal Cockatoo (*C. funereus*).

On leaving the outer aviary I was conducted into the studio where there was an invalid. This was another apparently of the same species as the very tame one, but showing a number of the brownish feathers of immaturity. Sir Charles tells me that he finds these Cockatoos very delicate at first, though when acclimatized they do not seem to feel the cold. This one had been very ill the day before, but appeared to be recovering when I saw it.

In an inner room, fitted up with cages and aviaries and heated by hot-water pipes were several more Cockatoos of different kinds. Another black one, smaller than the others was apparently an immature *C. banksi*. It was remarkably tame, and an altogether delightful bird. It flew on to my arm and climbed over my shoulders and rubbed its large beak against my ears. I was very much struck by the extreme gentleness of these Black Cockatoos, they seem to be the gentlest and most affectionate of Parrots, rarely, if ever, using their powerful bills as weapons of offence or defence. Amongst Sir Charles' other Cockatoos in this room were three Gangas (*Callocephalon galeatum*), two males and a female.

D. SETH-SMITH.

RECENT PUBLICATIONS.

THE IDENTIFICATION OF BIRDS.

In two recent numbers of *Animal Life* (November and December, 1903) Mr. Frank Finn has contributed a paper on this subject which should prove useful to those who study the relationship of the different families of birds to one another.

Mr. Finn's object, in this paper, has been to show his readers how to determine to what family any bird belongs, by

some external and easily appreciable character. He especially draws attention to the situation of the nostrils and the extent of the gape of the mouth, and the scaling and webbing of the feet; and he shows how most families of birds can be satisfactorily separated by the bill and feet. The articles are illustrated by a large number of very good outline drawings of the heads and feet of species which are characteristic of the various families treated of.

RARE WATERFOWL BREEDING IN CAPTIVITY.

An extremely interesting article by Heer F. E. Blaauw, C.M.Z.S., on the breeding of some of his Waterfowl at Gooilust during 1903, appears in the current number of the *Ibis*. No less than seven rare species of Geese hatched and reared broods during the year, these consisting of Cereopsis (*Cereopsis novæ-hollandiæ*), Sandwich Islands (*Neochen sandvicensis*), Magellanic (*Chloëphaga magellanica*), Black-banded (*C. dispar*), Ashy-headed (*C. poliocephala*), Ruddy-headed (*C. rubidiceps*) and Snow (*Chen hyperboreus*). A female Maned Goose (*Chenonetta jubata*) laid two eggs, which were placed under a common hen which hatched them, but unfortunately killed both chicks, and a clutch of eggs laid by a Ross's Snow-Goose (*Chen rossi*) were destroyed by vermin. A pair of Trumpeter Swans (*Cygnus buccinator*) reared a brood of six. Heer Blaauw gives very interesting notes on the colour of the young of each species, and the following paragraph strikes us as particularly interesting:—

“In former years I have repeatedly bred young birds from a male of the Blue Snow-Goose (*Chen cærulescens*) and a white female of *Chen hyperboreus*, when the results of the union have invariably been Blue Snow-Geese, and not specimens intermediate in plumage between the two forms. This year a pair of these Blue Snow-Geese (the result of a mixed union) has bred, and the result has been a brood of four young, all recognisable at once as true Blue Snow-Geese.”

THE GIZA ZOOLOGICAL GARDENS.

Captain Stanley S. Flower, the Director of the Zoological Gardens at Giza, near Cairo, sends us a copy of the second edition of the Guide to that institution; it contains also an excellent plan of the Gardens. Eighty-five species of Mammals, 126 of Birds, and 41 of Reptiles and Batrachians are represented in the Gardens at the present time.

We are pleased to note that the three specimens of the Shoe-bill Stork (*Balænicæps rex*) are still alive and well. With the exception of a specimen living in the Governor-General's Palace Garden at Khartoum, these are the only examples known to be living in captivity at the present time. We give below an illustration of this remarkable species from Mivart's *Elements of Ornithology*, by the kind permission of the Publisher.



Balænicæps rex.

CORRESPONDENCE, NOTES, ETC.

FURTHER NOTES ON CAROLINA DUCKS.

SIR,—In answering the queries of one of our lady members, I hope that the additional information, as she suggests, may be of use to others also; hence my excuse for again intruding with one of my Anatine favourites. As to the probability of a pair of Carolinas breeding in a wired-over enclosure twelve feet by six, I can only say that Mandarins will breed, according to the Hon. Rose Hubbard, in an even smaller space; and Carolinas used to have the reputation of being better breeders, so that success is quite possible with these also. It would, however, be better in such a case to clip one wing, if they are not already pinioned, and let them out during the day, especially as a shallow weedy pond is available. They should, however, be gently driven in at night, and fed only at this time; nor should they be let out till fairly tame and used to their surroundings. If care is taken they are not likely to stray, unless perhaps about the laying season, when they are apt to get restless, though less so than Mandarins. The drying up of the pond in summer would not matter, as a very small tank is enough for ducks like these. It should be placed in their enclosure; a pan or tub a yard across and a foot deep will do, if some fresh water is put in daily and the whole emptied out every week or so in dry weather, to prevent the water getting too foul. A large bath sunk in the ground will be found to answer excellently. The pond should be seen to, if possible, when the birds are outside the enclosure.

The enclosure can be made either over grass or shrubs; in the latter case a turf should be put in every day or so. If a bit of the pond can be enclosed this would be a very good thing to do; it might be deepened at this point, so as to retain more water.

Food should be any small grain—wheat, barley, buckwheat—given in a trough of water; maize and hempseed may be added in cold weather. While the birds are confined in the small enclosure a few earthworms or small snails (about the size of peas) may be given daily.

As to their being bred to profit, this ought certainly to be the case if a good breeding pair be secured, as food and housing cost little. They are quite hardy, and a big hutch or kennel littered with straw or moss-litter is all they need for shelter. To breed a number it is better to have two ducks to one drake.

In conclusion I may say that our member Captain Boyd Horsbrugh, A.S.C., has kindly written informing me that a brood of Mandarin-Carolina hybrids was hatched at the Stephen's Green pond in Dublin, but unfortunately all, he believes, were killed by a terrier. He does not know which was the male parent. This at any rate shows that the cross is not so very

hard to obtain as might have seemed previously; but it is a pity that misfortune appears to attend the hybrids when produced.

F. FINN.

HYBRID MUNIAS.

SIR,—I should feel greatly indebted to you if you would kindly tell me whether there is a known wild hybrid between *Munia maja* and *M. atricapilla*; and also whether this cross has been reared in captivity.

I see that in the *Avicultural Magazine* of June, 1902, Mr. Harper advertises such a wild hybrid. And in his notes on the Crystal Palace Show in the Magazine for March, 1903, Mr. Seth-Smith says there was a white-headed Mannikin with a black throat, which might have been taken for a hybrid between *M. maja* and *M. atricapilla*, but which he believed to be the Javan form *Munia ferruginosa*. Is it possible that *Munia ferruginosa* is a cross? or is it a known species? I bought two of these birds last July: they appear to be very fond of each other and always sit side by side, but so far they have shown no inclination to nest.

D. HAMILTON.

The following reply has been sent to Miss Hamilton:

It is quite likely that wild hybrids may exist between *Munia maja* and *Munia atricapilla*, but I thought it strange that Mr. Harper should advertize such a hybrid, as it could hardly occur in India.

On looking up the advertisement, which was published in July (not June) 1902, I find that it relates to a hybrid between *Munia malacca* and *M. atricapilla*.

Dr. Russ speaks of the hybrid between *M. maja* and *M. atricapilla* (he calls it *M. sinensis*) as having been obtained in captivity.

Munia ferruginosa comes from Java, and I believe that *M. atricapilla* does not; the British Museum certainly records no examples from that island: the indistinctness of *M. ferruginosa* as a species is generally admitted: it has occasionally been received in the German bird-market in some numbers; but, up to 1879 Dr. Russ had not heard of its having been bred, nor have I heard of a case up to the present time.

A. G. BUTLER.

[We believe that several examples of *M. ferruginosa* were received by dealers shortly after, or at the same time, as the single specimen above referred to was shown at the Crystal Palace.—ED.]

FEATHER-PLUCKING.

The following reply has been sent to a member's query:

The cause of feather-plucking in Parrots is well-known; but when

the habit is once acquired, I believe it is practically incurable unless the bird can be turned loose in a large open-air aviary.

I think it probable that the varied interests of aviary-life would occupy the thoughts of the bird with something more sensible than perpetually denuding itself; and the comfort of clothing would be more appreciated in the open air, than in the warmth of a dwelling-room or a conservatory.

Feather-plucking results from two causes—incorrect feeding, or insect-pests: both produce irritation of the skin, to alleviate which the bird tears out its feathers.

The most certain means to adopt to induce a parrot to pluck itself is, to give it any kind of animal food. Bird-lovers frequently imagine, because parrots can be taught to talk, that they may be fed like human-beings; so they give them milk, butter, cheese, eggs, chicken-bones, fish, flesh, and fowl.

Another form of food which generally produces vomiting and laxity in parrots (excepting Lories, Lorikeets, and other honey-feeding parrakeets) is sop: this frequently results in skin-irritation and feather-plucking. When breeding, however, it is admitted that soft food, such as bread scalded with hot water and then pressed as dry as possible, assists these birds in rearing their young.

A third error in feeding is, to supply advertized mixtures of strange seeds to all kinds of parrots indiscriminately. Those who know anything about these birds are well aware that each group requires its own proper mixture; that to give the same seeds to a Budgerigar, a Lory, a Broadtail, a Grey Parrot, or a Macaw, is to invite both disease and death.

In "parrot mixtures" the most prominent seeds are pumpkin, melon or vegetable marrow (which can contain very little nutriment), hard maize, the germ or bud of the coming plant being the principal part which is eaten; prairie-grass, sometimes sold under the name of "sorghum" though it in no way resembles millet; and sometimes sunflower seed. The idea of the men who make up those strange combinations seems to be that any large seeds will answer for parrot-food. Feather-plucking is frequently the result of using these unnatural mixtures.

Insect-pests frequently result from the regular use of covers, to draw over the cages at night: it is to the use of these that I have to attribute the unsightliness of my own Grey Parrot, so that I speak from bitter experience.

I think it possible that, if when a parrot first begins to pluck itself, a little fluid magnesia is stirred into its drinking-water occasionally, and its diet is strictly attended to; the irritation may pass off before the habit of plucking out its feathers has been formed; and thus it may be cured. I have heard of such cases.

A. G. BUTLER.

THE LITTLE LORIKEET.

SIR,—I enclose a rough water-colour drawing of a Parrakeet. I wish you would be good enough to identify it for me. Is it the Little Lorikeet, *Glossopsittacus pusillus*?

The specimens I have were obtained at Goombargana, N.S.W. The birds were always in immense flocks feeding on the honey from the blossoms of the *Eucalypti*, generally so high up as to be out of range of my collecting gun, and were therefore somewhat difficult to obtain.

NORMAN B. ROBERTS.

The following reply was sent to Mr. Norman Roberts :

The Parrakeet is the one you suggest—the Little Lorikeet, *Glossopsittacus pusillus*. Although a common enough species in New South Wales, South Australia, and Tasmania, I am not aware of any living specimens having been brought to this country. There is no doubt whatever that it would be no more difficult to keep in health than the Varied Lorikeet (*Ptilosclera versicolor*) which has now been proved to do well in captivity on a diet of sweetened sop, or honey, and fruit.

The Little Lorikeet is said to be almost always found in company with the Musky Lorikeet (*Glossopsittacus concinnus*), and to be practically identical with that species in its habits. It is the smallest of the Lorikeets, measuring only about $6\frac{1}{2}$ inches in length.

D. SETH-SMITH.

PRICES OBTAINED FOR LIVE BIRDS IN 1856.

The following is a list of birds sold by auction at Stevens' on the 27th of May, 1856; the property of Mr. Davy, of the Bird Room, Baker Street Bazaar.

	Price obtained.
A young tame Grey Parrot and cage	.. 30/-
Handsome talking Grey Parrot, master of 20 words, and cage	.. 38/-
Ditto King Parrot and cage	.. 20/-
Ditto Grey talking Parrot, 2 years old	.. 46/-
Talking Grey Parrot, to talk on the hand, very tame, 3 years old	.. 80/-
Golden-headed Australian Talking Parrot	.. 36/-
Large Lemon-crested Cockatoo, talks well, very tame..	50/-
Pair of Indian Lovebirds and cage	.. 22/-
Three Java Sparrows and ditto	.. 8/6.
Ditto	.. 9/-
Pair of Silver Beaks and pair of Averdervats, with cage	17/-
Pair of Cut-throats and ditto	.. 27/6
Waxbills and 2 Bronze Mannikins with cage	.. 17/-

	Price obtained.
Four Doves in cage	.. 7/-.
Pair of Spicebirds and cage	.. 12/-.
Pair of Crossbills and ditto	.. 11/-.
Ditto and ditto	.. 11/-.
Virginian Nightingale and cage	.. 19/-.
Ditto and ditto	.. 23/-.

NOTES ON PARRAKEETS.

SIR,—I see Mr. Catleugh's experience with a hen Budgerigar trying to kill her mate.

Many years ago a hen Budgerigar I had did precisely the same thing, and, if I recollect, tried to murder the young, too. It caused me to give up breeding them, for I could not say when the avicidal mania might come on, and I could not be always watching them.

I recollect that with the first pair of Blossom-heads I had, the husband was always dreadfully hen-pecked until the breeding season came on, then he asserted his authority, and kept his wife in order.

In Mrs. Johnstone's interesting communication about breeding the Rock-Pebblers, she talks of the inability of the King Parrot to stand cold. My experience is that the King Parrot is more impatient of the atmosphere of a room than that of cold. In fact all the Broad-tails seem to me fairly indifferent to cold, but then I have never kept the northern forms.

The endurance of cold by Parrots is a rather interesting subject: it seems to be settled by species rather than by habitat. No doubt a large number of species of Parrots could stand our climate if they had perfect liberty.

F. G. DUTTON.

A GOOD HEATING APPARATUS FOR BIRDROOMS, ETC.

One of the best and simplest forms of heating apparatus for small aviaries or birdrooms that we have seen was that exhibited by Mr. J. Dewhurst, of 52 Northend Road, West Kensington, at the recent Crystal Palace Bird Show. It consisted of wrought iron flow and return pipes, connected to a small conical copper boiler which is heated with a Bunsen gas burner. The boiler has a casing of iron or copper, from the top of which a small pipe carries off the fumes. There is no heating so good as that of hot-water pipes, and Mr. Dewhurst's apparatus is the simplest form of the application of this system that we have seen, and one of our members who has tried it informs us that it is perfectly efficient. It can be fitted in any room in a few minutes. The price is £2 10s. with zinc tank and iron boiler casing, or £3 with the same in copper.

THE ADMINISTRATION OF MEDICINE TO BIRDS.

SIR,—I notice Dr. Creswell has considered it necessary to comment on my remarks *re* the above.

That any two persons should not agree is reasonable, but for Dr. Creswell to endeavour to impress on your readers that my remarks referred to cases of imminent danger is unreasonable, to say nothing more, and I am quite willing to leave your readers to decide as to whether his argument is a just interpretation of what I said.

My notes under *Post mortems* are necessarily short. Having always endeavoured to assist the members I beg to say if at any time it is within my power it will always be a pleasure to render them further help.

ARTHUR GILL.

[Crowded out of the January number.—ED.]

FOOD FOR JAY.

The following reply has been sent to a member's query :

The best food for a Jay consists of crumb of stale household bread, powdered sweet biscuit, yolk of egg, ants' eggs, and dried flies, thoroughly mixed together and slightly damped; or, if you wish to save the trouble, 'Century Food' Grade 2, with a little yolk of egg in flake added, and about two parts of crumb of stale household bread to one of the food, will answer the same purpose.

Once a week a cubic inch of raw beef minced, should be given in addition to the staple food; also any mice, young sparrows, or sparrows' eggs when you can get them; cockroaches or other insects and their grubs, spiders or centipedes.

Crack-nuts are much appreciated, or green peas when in season; also small fruits or banana.

Too much butcher's meat is bad, though fur and feather in the form of mice and nestling birds (which are natural food) do good, and help to keep this and the other Crows in good plumage.

I am speaking from experience; as my two Jays (English and American) are always in perfect health and plumage excepting when in moult.

The cage for a Jay cannot be too large, as it is an active bird and very playful; it also likes to bathe daily.

A. G. BUTLER.

BOWER BIRDS.

SIR,—I should be very much obliged if you could kindly give me information on the following subjects.

Will Bower-birds live in an aviary? If so which species is recommended? Are they dangerous to other smaller birds? What should they be fed on?

LOUISA FEILDING.

The following reply has been sent to Lady Louisa Feilding:

If they are properly fed, there is no difficulty in keeping Bower-birds in an aviary; but during the winter, it must be an indoor one and moderately warm.

I do not think you can improve upon the Satin Bower-bird: I have had a pair since September 1899 which is now in perfect health and plumage, the cock never having had a day's illness; the hen however was ill for three days some months ago, but recovered rapidly after a dose of castor-oil.

As I keep my birds by themselves in a small aviary, I cannot speak from experience as to their behaviour towards small birds; but Mr. Phillipps tells me that they do not seem to trouble about those much smaller than themselves, though they dispute rather fiercely with others more nearly of their own size.*

They should have some soft food: ('Century Food' would be as good as any), also plenty of fruit—oranges, ripe pears, or grapes, being favourites; and insects in some form; cockroaches they like as well as anything else: they are moderate eaters.

A. G. BUTLER.

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

(See also page 132).

The official list of additions to the Gardens for the month of December 1903, from which the extracts on page 132 were taken, appears to have been incomplete, and a revised list was issued on January 23rd, and received just before going to press. This includes the following additions besides those recorded above:—

DEC. 4.	1	Short-toed Eagle (<i>Circaëtus gallicus</i>)	..	Captured at Sea.
	1	Red-billed Toucan (<i>Ramphastos erythrorhynchus</i>).		Demerara.
	1	Blue-fronted Amazon (<i>Chrysotis æstiva</i>)	..	S. America.
„ 14.	2	Malabar Mynahs (<i>Poliopsar malabaricus</i>).	..	India.
„ 15.	2	Hybrid Parrakeets (between <i>Platycercus eximius</i> and <i>Psephotus hæmatonotus</i>)	..	Australia.

* The adult male Satin, Spotted, and Regent Bower-birds I have found to be very uncertain in their likes and dislikes, the latter quarrelling only with his own species. They all interfere with the nesting of other birds.—R. P.

For the Year ended

£ s. d.	£ s. d.	
13 11 11½		Balance from last year.
		<i>Received by Business Secretary and remitted to Treasurer:</i>
206 10 0	413	Subscriptions, current.
13 10 0	27	„ „ 1903-4.
16 15 0	134	Entrance Fees.
	£ s. d.	Donations:
	33 0 0	Mr. Phillipps.
	33 0 0	Mrs. Phillipps.
	1 10 0	Mrs. Reid (Madeira), two sums.
	1 1 0	Mr. Meade-Waldo, two sums.
	1 0 0	Mrs. Waldegrave Thompson.
	1 0 0	Mr. Gibbins, two sums.
	0 11 0	Rev. H. D. Astley.
	0 5 8	Small sums.
71 7 8		
1 11 6		Mr. Seth-Smith's share of Lorikeet plate for <i>Parrakeets</i> .
0 7 4		Sales, etc.
6 8 10½		Private advertisements.
316 10 4½		
		<i>Publisher's Receipts:</i>
75 11 8		Sales—143 full volumes.
15 10 0		„ „ 262 odd numbers.
5 5 6		Sold Artists' Coloured Plates and Patterns.
		Cases for binding annual volume:—
	£ s. d.	
	5 6 4	116 Old Series @ 11d.
	0 4 8	4 New Series @ 1/2.
5 11 0		
1 7 6		Mr. Bonhote's share of <i>Bahama Birds</i> plates, for private publication.
		Charged Hamlyn for circulating Notices,
2 5 0		3 @ 15/-.
18 19 6		Trade advertisements.
0 16 8		Colouring Members' plates.
0 2 2		Miscellaneous.
125 9 0		
11 19 7		Publisher's Balance, as per contra.
	32 10 6	Paid on Plates proper to 1903-4.
	4 4 4	Deficit.
36 14 10		Adverse balance.
£504 5 9		

HONORARY TREASURER'S BALANCE SHEET.

1902-1903.

£ s. d.		£ s. d.
13 11 11½	Balance from last year.	
316 10 4½	Received from Business Secretary.	
36 14 10	Adverse Balance.	
£366 17 2		
		Paid by me, and taken into account this year 366 17 2
		£366 17 2

W. H. ST. QUINTIN.

22nd Dec., 1903.

POST MORTEM EXAMINATIONS.

RULES.

Each bird must be forwarded, as soon after death as possible, carefully packed and postage paid, direct to Mr. ARTHUR GILL, M.R.C.V.S., Veterinary Establishment, Bexley Heath, Kent, and must be accompanied by a letter containing the fullest particulars of the case. Domestic poultry, pigeons, and Canaries cannot be dealt with. If a reply by post is required a fee of 2/6 must be enclosed.

RED-CRESTED CARDINAL (Miss Sturton-Johnson). [Apoplectic fit caused the inability to fly, the wing being partially paralysed by pressure on the left side of brain caused by extravasated blood in this region. The brain mischief was the cause of death. It was a cock].

SAFFRON FINCH, cock (Mr. G. C. Porter) [Your bird died of a fractured skull which was no doubt caused by flying against something hard. Am very pleased to assist you as far as I am able].

POPE CARDINAL (Capt. Rice). [Apoplexy was the cause of death. These birds can do with plenty of exercise, and should not have many mealworms if confined in a cage].

PINTAIL NONPAREIL (Mr. Picard). [Your bird died of inflammation of the liver. It is difficult to assign the cause. It may be from chill, although it is difficult to say how this was contracted].

ST. HELENA WAXBILL (Rev. R. H. Wilmot) [The bird was much emaciated, the cause being a large tumour in the abdomen].

MOCKING BIRD (Rev. R. H. Wilmot). [Bird died of concussion of the brain, and there were several marks of old injuries about the skull and wings. I have had Mocking Birds all the winter in outdoor aviaries which never seemed to suffer inconvenience from the weather].

HEN ZEBRA FINCH (Capt. B. Horsbrugh). Died of inflammation of oviduct as a result of inability to lay the egg].

BUDGERIGAR (Miss Appleton). [Your bird was badly injured on left side of breast and left leg. It had wasted a good deal owing no doubt to pain].

RED-CRESTED CARDINAL (Miss L. Sturton-Johnson). [Your bird died of apoplexy. There was one extravasation on brain of a few days standing, and one quite recent which no doubt was immediate cause of death].

HEN CORDON BLEU (Mrs. Barber). [Death was due to hæmorrhage of the lung].

Cock BLOODRUMP PARAKEET (Mrs. Fogg Elliot). [Bird died of pneumonia].

BROWN-THROATED CONURE (Miss Sturton-Johnson). [Your bird died from injuries on side of head. The skull was fractured. It is annoying to lose birds, but one must never be surprised at such occurrences in a mixed aviary. Some birds that are quiet for months seem to develop the bullying propensity suddenly, and if successful at first will sometimes do considerable damage before detected. I have experienced this with a cock Cockatiel and a cock Californian Quail.

ARTHUR GILL.

Cloth, gilt top, Small 8vo., Six Shillings net.

THE
BIRDS OF TENNYSON,

BY
WATKIN WATKINS, B.A.CANTAB.

Member of the British Ornithologists' Union.

"Many as are the volumes which have been written on different phases and aspects of our late Laureate's works, this, we think, is the first time that a whole book has been devoted to "The Birds of Tennyson." Mr. W. Watkins, the author, is a member of the British Ornithologists' Union, and has, therefore, a scientific as well as a literary interest in the subject. And his verdict in the matter is this—that 'No poet is so satisfactory to the ornithologist [as Tennyson], for no poet had a more accurate knowledge of birds or had a happier power of describing their peculiarities.' Mr. Watkins' pages are, indeed, themselves a testimony to the acuteness as well as the frequency with which Tennyson described the 'feathered tribe.' All this, of course, is an old story to the students of the poet, but it is pleasant to find Tennyson's references to birds collected and systematised as they are in this agreeable treatise, which is, as it should be, carefully and usefully indexed. In his introduction Mr. Watkins deals with Tennyson's allusions to birds in general, and in subsequent chapters discourses successively of birds of song, birds of passage, birds of prey, birds of sport and so forth. The result should convince those who are not already convinced that as a poet of the birds Tennyson ranks with Shakespeare. Mr. Watkins, as a naturalist, of course appreciates fully the poet's stanzas on 'The Thristle,' of which the ignorant have been accustomed to make game. He recognises the fidelity with which the bird's 'note' is reflected in such lines, homely enough, as—

Summer is coming, summer is coming,
I know it, I know it, I know it'

And he gives other instances of the poet's successful translation of birds' song into literary speech."—*The Globe*.

"Lovers and all in quest of unhackneyed forms of endearment could not do better than add to their possessions a copy of 'The Birds of Tennyson,' by Watkin Watkins. The book is a well-compiled number of extracts from the poems of Tennyson, Wordsworth, Shakespeare, Byron, Chaucer, Milton, Cowper, and other poets, in which the manners and customs of birds are introduced as similes, in dainty lines. The volume contains some excellent illustrations of birds by G. E. Lodge."—*Pall Mall Gazette*.

"Mr. Watkins, who must have spent a vast deal of time in the study of Tennyson's poetry from the natural history point of view, publishes a number of extracts, and enlarges on them in a most interesting manner. Mr. Watkins' book should prove very acceptable to Tennyson lovers."—*The Yorkshire Post*.

"'The Birds of Tennyson' should have a strong attraction, for its well-written pages are a powerful proof of the great influence exercised upon the impressionable mind of the poet by the beauties of form and the joyous songs of the feathered kingdom. There is another class of readers who should also find much pleasure in a perusal of the volume—those lovers of Tennyson as a poet who, not taking any special thought about birds, will be astonished to find how much their favourite poet knew about them and how narrowly he observed the life that moved about him. They will find, too, by the aid of Mr. Watkins' comments as an expert, how appropriately Tennyson employed his innumerable references to birds of all kinds, and especially song birds. Excellent illustrations by G. E. Lodge enhance the value of the volume."—*The Shrewsbury Chronicle*.

LONDON:

R. F. Porter, 7, Princes Street,
CAVENDISH SQUARE, W.

IV.

NOTICES TO MEMBERS—*Continued.*

Outdoor aviary, *pairs* :—Cockatiels 12/6, Blossom-headed Parrakeets 21/-, Blue-winged Lovebirds 10/6; imported cock Californian Quail 7/6; or exchange small foreign finches.

GODDARD, Rothesay, Thicket Road, Sutton.

Cock Great Indian Weaver-bird (*Ploceus megarynchus*, Hume), a prize-winner at the last Crystal Palace Show, very rare, 80/-; cock hand-reared Grey-winged Ouzel (*Merula bouboul*), perfect health and feather, last year's bird, 30/-.

E. W. HARPER, 52, Goldington Avenue, Bedford.

One of the finest Scarlet Macaws living with 35/- stand, Blue-winged Chloropsis full song, two Red and two Black Goulds cocks, two pairs Ruficaudas non egg-eaters, cock Bicheno, pair Parrot Finches, pair Long-tailed Grassfinches with one young very prolific, all absolutely perfect; hen Gould; hen Pectoral, healthy, defective plumage. *Greene's Parrots in Captivity* 15/-. Tegetmeier on Pheasants new 4/-, many small works on foreign birds, cages suitable for one to twenty pairs, 18 framed pictures for birdroom-decoration mainly coloured plates from Magazine.

NICHOLSON, Coltbridge Gardens, Edinburgh.

Large mealworms 1,000 2/6, 500 1/6, post paid, cash with order. Ants' eggs, good quality, thoroughly cleaned 2/6 lb., best Dutch ditto, best obtainable 3/6 lb. postage extra. C. P. ARTHUR, Melksham.

Very tame hand-reared cock Budgerigar, lovely pet for a lady, sava 'Joey, dear Joey,' price 25/-; cock Grand Eclectus 35/-, hen ditto cage-moulted 50/-; Mealy Rosella 15/-, tame pet; King Parrakeet and large round cage 50/-; hen Double-band 10/-; hen Ruficauda 7/-.

C. P. ARTHUR, Melksham.

Splendid Gouldian Finches 21/- pair, White-winged Doves perfect 12/6 pair, Wandering Tree-Pies 22/- each, Siberian Goldfinches 6/- & 7/6 each very large birds, German Bullfinches 9/6 pair, Californian Quails (adults) 16/6 pair, Brown-faced Conures 10/-. Bava Weavers 7/6 each, cage-moulted, Avadavats 3/- pair, adult Budgerigars 7/6 pair, Blue-crowned Conures 38/6 pair, Javan Parrakeets 7/6 each, cock Saffron Finches 3/6, Pileated Finches 7/6. Green Glossy Starlings 20/- each, St. Andreasberg Rollers 8/6, 10/6. & 12/6 each, Zebra Doves 4/6.

H. W. BURGESS, High Street, Bushey, Herts.

WANTS.

(*These are charged for at the same rate as Birds for Sale.*)

Hen Red-faced Lovebird, hen Peach-faced Lovebird.

W. T. CATLEUGH, Clyffe, Richmond Wood Road, Bournemouth.

King Parrakeet from outdoor aviary, state age.

ALBERT J. SALTER, Thame, Oxon.

Wanted hens—Bleeding-heart and Crested Pigeons, Patagonian Conure. Would exchange cock Bleeding-heart if preferred.

Miss ALDERSON, Worksop.

Wanted either one or three Indian Zosterops; must be the small variety, not the larger Chinese sort.

Mrs. HOWARD WILLIAMS, Hamilton Lodge, Bickley.

Hen Saffron Finch, pairs of Redrumps, pairs of Pennants; all must be from outdoor aviary and adult birds.

H. W. BURGESS, High Street, Bushey.

Hen Violet-eared Waxbill, hen Ringed Finch, cock White-eared Grassfinch, pair Cuba Finches.

R. PHILLIPPS, 25, Cromwell Grove, West Kensington Park, London, W.

III.

NOTICES TO MEMBERS—(Continued from page ii. of cover).

NEW MEMBERS.

SOUTHPORT CORPORATION; Mr. JAMES HATHAWAY, Curator Hesketh Park and Aviary, Hesketh Park, Southport.
Dr. HOCKEN, F.L.S.; Dunedin, New Zealand.
Miss DAWBARN; Wisbech House, Leamington Spa.
Mr. ROBERT SERVICE, M.B.O.U.; Maxwelltown, Dumfries.
Mr. W. K. MORRISON; Princetown, Trinidad.
Dr. TANNER; Vauvert House, Guernsey.

CANDIDATES FOR ELECTION.

Lady SETON-STUART; Touch, Stirling; and
The Honble. Mrs. HAMILTON; Dunmore Park, Larbert.
Proposed by Capt. TWEEDIE.
Mrs. A. A. DALE; c/o Messrs. King & Co., 9, Pall Mall.
Proposed by Capt. HORSBRUGH.
Mr. R. I. POCOCK, F.Z.S.; The Zoological Society's Gardens, Regent's Park; and
Mr. R. D. STEWARD; 6, Stanger Road, South Norwood.
Proposed by Dr. BUTLER.
Mr. H. L. BROOKSBANK; Walkington Park, Beverley.
Proposed by Dr. SAVRGE.
Mr. E. C. STUART BAKER, F.Z.S., M.B.O.U.; Debrugah, Assam.
Proposed by Mr. INGLIS.
Mr. HARRY MITCHELL; The Duchy House, Harrogate; and
M. JOEL BLAMEY; Huasan, Andalgala, Catamarca, Argentina.
Proposed by The Hon. Business Secretary.

MEMBERS' SALE AND EXCHANGE COLUMN.

The charge for private advertisements is one penny for every four words. Names and addresses of advertizers must be paid for. Each statement of price, such as 3/6, is counted as one word. Every advertisement must be prepaid, and must reach the Secretary not later than the 19th of each month. The Council reserve the right of refusing any advertisement they may consider undesirable.

A beautiful, rare, brush-tongued Lory in brilliant crimson and green plumage, young, and in perfect health. Apply by letter to
Lady D., Dunstall Priory, Shoreham near Sevenoaks.
From outdoor aviary:—Blue Grosbeak 12/6, cock Goldfinch 5/-, one Non-pareil 6/-, Indigo cock 4/6, Pope Cardinal cock 4/6, Saffron Finch 2/6, one Parson Finch 5/6. ELLIS, 34, York Street, Wakefield.
Pair of Diuca Finches, have nested, acclimatized, 12/6.
Miss ALDERSON, Worksop.
Fine healthy Budgerigars, full plumage, outdoor aviary, 6/6 per pair.
Mrs. WILLIAMS, Emmanuel Parsonage, Exeter.
Very fine 1903 Peacocks and Pheasants, specially bred for size for generations, 30/- pair; single cock 21/-; Silver Pheasants 21/- pair.
O. E. CRESSWELL, Esq., Morney Cross, Hereford.
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THE JOURNAL OF THE AVICULTURAL SOCIETY.

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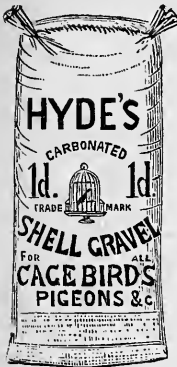
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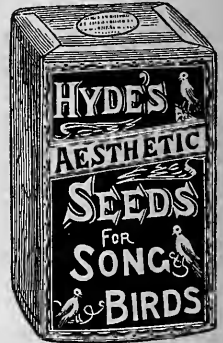
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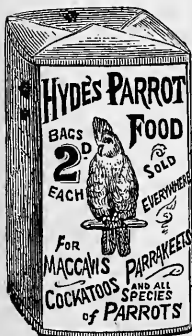


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THE SPOTTED GROUND-BIRD.
Cinclosoma punctatum.

Avicultural Magazine,

BEING THE JOURNAL OF THE
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MARCH, 1904.

THE SPOTTED GROUND-BIRD.

Cinclosoma punctatum.

(*Cat. B. Brit. Mus. VII., p. 332.*)

By REGINALD PHILLIPPS.

I have been asked to write about *Cinclosoma*; and as I am probably the only person in this country who has ever kept a specimen of the genus alive there is no escape, notwithstanding that some years have elapsed since my bird lived—and died; happily my notes are pretty full.

It was in the afternoon of the 8th July, 1899, that a bird* arrived, with a letter offering me an "Australian Rock-Thrush." The name "Rock-Thrush" was associated in my mind with the Pied Rock-Thrush, *Monticola saxatilis*, of which I had, and had had, many examples, and I was vexed that so common a species should be sent to me. However, on uncovering the box, quite a different bird was exposed to view. It seemed familiar, but somehow I could not just manage to get my tongue round the name; nevertheless it appeared an innocent kind of thing, so I accepted and placed it in a six-foot cage in my dining-room, and, drawing up a chair, sat down to study it.

In outward appearance there was nothing startling about the little stranger, but it was decidedly interesting. Of about the size and shape of a Turtle-Dove, it had rather a long fan-shaped tail, a slender black bill, and short pale-flesh-coloured

* I heard later that a pair had started from Australia but that the female had been "buried at sea."—R. P.

legs and toes. Its various parts, taken by themselves, reminded me of just so many different species, but when put together they produced a bird which differed from each and every of them.

The bird was half crouching on the sand, head, body, and tail nearly in a straight line, but with the tail-end tilted up the other depressed; and thus it remained exactly where I had placed it, and as rigid and motionless as if it had been a wooden Dove out of a child's Noah's Ark. The top and back of the head were brown washed with slate, this colour occupying the whole space between two much lengthened white superciliary streaks, but on the forehead and behind the ear-coverts the slate was more pronounced. The chest, right across from side to side, was rich blue-slate, and I thought of the Californian Quail, but, on recollecting that the latter has a crest, I decided rather upon the Chinese Quail. On the hind cheeks, however, there was a conspicuous oblong patch of white, and the throat was jet black, pointing to the familiar Chinese Jay-Thrush, *Garrulax chinensis*. But as my eyes wandered over the upper parts, and I gazed on the rich red-brown feathers each with a central streak of darker, I recognised the Alpine Accentor.

On examining the under parts, I found that the blue-slate chest was sharply bounded below by a thick irregular, or perhaps double, band of large oval black beads, below which came an unspotted abdominal region of dull cream, strongly suggestive of the Sand-Grouse; but the unspotted centre was bordered by very thickly spotted flanks, the rich colour of which was unmistakably that of the Fieldfare.

I had proceeded thus far with my examination when, wishing to inspect the bird from a different point of view, I mechanically reached out my hand in order to give it a twist round, when it suddenly started up, and marched along the length of the cage with a gait and movement there was no mistaking, and with impatient annoyance I ejaculated—A Pheasant; but as the creature stalked solemnly back, each movement of leg accompanied by a chuck of the tail, just the wooden toy with movable tail going click click as by clock-work, I exclaimed with increased bitterness—A cheeky Weka Rail.

Alas for the fallibility of human judgment, for as the bird settled down and began to peck about I saw that it was a Dove.

All this time my wooden friend had kept to the ground, declining some quite low perches which I considered it ought to have perched upon; roosting time came, however, and it promptly flew up to the highest perch, along which it ran with the nimbleness of a squirrel, and I shouted with joy—A Touraco. Instinctively I glanced downwards but, alas! instead of the semi-zygodactyle foot I saw three long toes forward and one backwards, with large blunt thick strongly curved claws; and it had too a straight slim bill, absolutely diverse from the short thick bill of the Touraco.

That night I had to retire and confess myself beaten, and also during the following day. It certainly did occur to me that "Ground-Thrush" might have been intended and I flew to *Geocichla*—but *Geocichla* did not respond. However, on the second day, while turning over the leaves of Wood's "Birds," I came on a capital wood-cut of my friend. The value of illustrations in a work on Birds was fully demonstrated.

The species is called by Wood, The Spotted Ground Thrush or Ground Dove, and the former of these names is, or was, applied to it in the Natural History Museum. This bird is not a Thrush, and is remarkably un-Thrush-like. The generic name "Ground-Thrush" has been very commonly accepted for birds of the genus *Geocichla**, and to apply it to *Cinclosoma* is confusing and senseless; names should be used which are appropriate and convey a definite meaning. In Campbell's *Nests and Eggs of Australian Birds* the name of "Ground-bird" is used for this genus, and should be adopted in this country.

Let me turn to the Rev. J. G. Wood's "Birds," p. 343, and quote a few words:—

"Australia possesses a curious and valued specimen of this group, which is popularly called the Spotted Ground Thrush, or Ground Dove.

* A coloured plate of a rare and handsome member of this genus is ready, and will be published very shortly.—R. P.

“This bird is found throughout the greater part of Australia and Van Diemen’s Land, and on account of the delicacy of its flesh is greatly prized by both natives and colonists. Being always attracted by certain localities, it may be easily found by every one who is acquainted with its habits. Unlike the generality of birds, it cares little for trees or bushes, and seldom is known to perch upon the branches, preferring the tops of low stone-covered hills, or rude and rocky gullies, having a decided predilection for those which are clothed with grass and scrubby brushwood. The spaces between fallen trees are also a favourite haunt of this bird.

“The Spotted Ground Thrush is no great flyer, taking to wing with much reluctance, and seldom voluntarily raising itself in the air except to fly from one side of a gully to another. When it does take to flight, especially if alarmed, it rises with a loud fluttering noise, and proceeds through the air in an irregular and dipping manner. To compensate, however, for its imperfect power of wing, its legs are well developed, and render it an exceedingly fast runner, so that it is able to conceal itself with great rapidity as soon as it finds cause of alarm. . . . The flesh of the Ground Dove is remarkably good, and when the bird is fat it meets with a ready sale, and is generally disposed of to the game-dealers together with the painted quail, as it arrives and leaves at the same time with that bird.

“The voice of the Ground Dove is not very sweet, its cry or song consisting of a low piping whistle.”

It will be observed that when Wood wrote, less than fifty years ago I fancy, the Spotted Ground-bird was common and well known—now it is rare. For over three years I have been endeavouring to obtain another specimen—but in vain. Mr. P. Peir of Sydney wrote to Mr. Carrick on the 9th June last as follows:—“Two days after you left Melbourne I dropped on to something rare in the soft-bill line, viz. a Spotted Rock-Thrush At the present time he is in perfect health and condition, having had nothing to eat but yolk of egg and mealworms, of which he will consume at a frightful rate. I hope he will be alive when you come back as I am sure you could win in the

rarest bird class at the Palace with him. The plumage is not gaudy but very fine. He is as large as a Turtle-Dove. . . . When feeding, the tail is carried open like a fan and erected in the same manner as that of a Peacock." From what I noticed of the defenceless nature of the species, I feel that it is doomed to extinction. The only hope of its being saved rests on the large extent of country over which it is spread—"Tasmania and South Australia, as well as the whole of the eastern portion of the continent as far as the Wide-Bay district" (Mus. Cat.); "S. and E. Australia, Tasmania." (Hand-list, IV.); "It inhabits the forest country, heavy and open alike, from South Queensland to South Australia and including Tasmania." (Campbell). Such a wide range gives the bird a chance, at any rate for the present, though its habits as described by Wood are against its preservation. It will be observed that Mr. Peir also calls it a "Rock-Thrush," a name not mentioned by Mr. Campbell, and which should not be accepted any more than those of Ground Thrush and Ground Dove.

Wood says—"The spaces between fallen trees are also a favourite haunt of this bird." I think he is mistaken. The bird is timid and watchful in the extreme, detects the approach of man long before the man is in sight of the bird, and at once dashes off to fallen tree, log, large stone or rock, or other raised thing on the ground, behind which it stoops for the purpose of concealment, becoming the wooden Noah's Ark bird already mentioned. Being itself so low on the ground, it seems to think that if it can only get behind something it will not be seen. When running to shelter also it seeks to follow every depression in the ground, and to take advantage of every slight mound or rise in the ground behind which to steer its course. Many a time, on peeping through a window into the garden aviary, I have seen my bird feeding in the open, whither from preference it would always resort; but no matter how cautiously I might attempt to open the door, the bird would have disappeared, and would invariably be found behind something lying casually on the ground. It would never go on to the top of anything of the kind, nor rest on a stone as figured by Wood or on a mound.

Wood says—"It cares little for trees or bushes, and seldom is known to perch upon the branches." Campbell tells us—"I have seen it perched on thick limbs of trees about forty feet from the ground." Gould, I am told, figures the female on a low perch. The latter I feel must be an error. I never saw my bird perch in any bush or on a low perch. During the day it usually kept strictly to the ground; but when, *during the day*, it did mount to a perch, it invariably went up to the highest perch in the aviary, nearly nine feet above the ground, being very fond of some long poles, along which it would run with considerable fleetness, or walk as on the ground. After close watching, I formed the opinion that it sought these high perches in order to get more sun. If it chanced to be in a tree, it would instantly crouch and become motionless on the approach of any one. It is quite in keeping with what I saw of my bird that it should fly on to "thick limbs of trees about forty feet from the ground." I venture to lay stress on the word "thick."

My bird *never* roosted on the ground but invariably on a high perch, whether in cage, birdroom, or garden. It went to roost early, and seemed to select a thick limb just where it branched from the trunk; it slept in a crouching attitude, usually with the tail level with or above the level of the body; in a large tree, on a thick bough and close to or actually pressing against the trunk, it would be practically invisible.

It seemed to be utterly defenceless, and never attempted to defend itself from the other birds, of which it was much afraid. Concealment seemed to be its one idea, deeply rooted in every fibre of its nature, the posture being almost always that which I have already described. It did not actually squat after the manner of Snipe, Quail, &c.; these sit low with legs ready to *spring* into the air and seek safety in flight. Such a position would not suit the Ground-bird, *who holds itself ready to display and run*. Stooping low, head and forepart low, the hind-end a little up, it remains so still that often birds would go close up without appearing to notice it. Let me here quote from some notes written while the bird was still alive:—"When the bird, crouching in the thickest shelter or most shady shadowy spot he has been able to run to on the appearance of an enemy

in the hopes that his general russet appearance above may save him from detection, finds the foe right on him, for not until the last moment will he move, then, and not till then, does his tail suddenly 'go off.' With such startling quickness is the tail raised perpendicularly, sprung into a full fan in the face of the intruder, closed up and let off again, that it is really alarming to any creature not expecting it; it is like the sudden explosion of a bomb under one's feet. The white tips to the tail feathers moreover give a curious flashing fireworks effect to the whole performance in the shade of the forest; the body of the bird also is to a certain extent invisible behind the fan—he endeavours to hide himself as it were behind his own tail. The suddenness of the whole movement is invariably successful, the startled foe bounding off in one direction as from a venomous snake giving *Cinlosoma* an opportunity of scuttling off in another. As a rule, if the ground be not too open, he runs off straight like a rat. But I have seen him when taken off his guard, and attacked unexpectedly and unprepared in the open, run off in a frantic zigzag course, the speed being so great and the rapid and frequent changes from the straight line being so abrupt that, notwithstanding his short legs and closeness to the ground without which such a rapid zigzag course would be impossible without an upset, his body swayed sideways, right and left and left and right, just like a racing omnibus, a sight often to be seen in London in olden days."

The tail of my bird, which was a male, greatly fascinated me. It consisted of twelve feathers, the four* central very lightly, the remainder broadly, tipped with white. As a rule the feathers were kept closed, so that the white tips were invisible and did not betray the bird, the upper surface of the two central feathers, practically the only ones to be seen from above, being brown, the remainder blackish. On certain occasions the tail, fully expanded, would be raised until perpendicular like that of the Peacock. It was not usual, as might be inferred from Mr. Peir's letter, for the bird to expand it whilst feeding. In my garden it *never* fed with expanded tail. It expands the tail

* I think four, but the tail of my bird was not quite perfect.—R. P.

for the purpose of scaring its foes, as has already been described. Doubtless it expands it also as a courting posture, and perhaps as an ordinary display like a Peacock. When it spreads the tail while feeding in the presence of a human being, it is from nervousness, a kind of instinctive action to keep him off. I understand that Mr. Peir's bird was kept in a cage so that it was compelled to stand its ground. After a time my bird became tame and friendly, and *perhaps* occasionally expanded his tail as a display to me—but this too was in a cage.

I have not done with the tail yet. The colour and pattern of the under, of the display, side differ from the upper. Mr. Grönvold has taken an infinity of trouble in his endeavours to bring the expanded tail into his excellent illustration, and to shew both the pattern on the under tail and the distinctive markings of the female which are in the fore-parts of the bird. But he has never seen the bird alive, much less the display; and to sketch a posture accurately from a verbal description is practically impossible. And even the pattern on the under side of the tail can hardly be seen in a dried faded skin, as a skin is stiff and hard, cannot readily be opened, and if opened does not shew the feathers evenly as in the living specimen. I have never seen a female and do not know that it *does* raise and expand the tail—though probably it does when alarmed; and the pattern on the female seems to be less distinct than on the male. It must not be supposed that because two females appear in the illustration that the species is polygamous.

The following is the description of the under tail taken from the living male:—The outer web of the outer feather on each side is black, basal portion of inner bright slate, the black from the outer web slanting across and occupying the apical portion, but tipped with white. All the other feathers are bright slate, with a subterminal band of black and tipped with white. Taking the under surface of the expanded tail as a whole, the bright slate forms a solid and slightly pointed arch. This is surmounted by the arch of black with its shaft support (outer web of each outer feather) on each side right down to the base, the whole structure being crowned with white. I observe that I have not made any special note of the part taken in the display

by the handsome under tail-coverts. Speaking from memory, they droop over the vent and are not raised, but on this point I may be wrong. Neither in the Museum Catalogue nor in any work that I possess do I find any reference to the remarkable coloration of the under side of the tail and the still more remarkable uses to which it is put. Mr. Peir gave a description of his bird, and referring to the tail says—"The tail is brown with white tips and all *white* underneath." This is very strange; perhaps "slate" was written, and "white" is a transcriber's error. At any rate it shews that he observed the great difference between the upper and under sides.

My Spotted Ground-bird was a very quiet amiable in-offensive creature, but needed a good deal of attention; to some extent a cross-tempered Spotted Bower-bird was the cause of this; it would have got on much better in an aviary of smaller birds. For some little time after being introduced into the garden the posture assumed was head down tail up. As long as it was in the garden it continued to rush for shelter on the approach of any one, but gradually ceased to elevate the hinder parts.

When strolling about it often looked Dove-like, and sometimes like a diminutive hen Pheasant; but there is nothing of the Dove about it. Although keeping near shelter it liked to come into the open and bask in the sun or peck about. If on a bright day it should go up to a high perch in the open, if disturbed it would sometimes drop into the nearest thicket almost as stone-like as the Little Owl. It seemed to be able to fly very much better than might be supposed from Wood's account, being quite clever on the wing amongst the trees. The wings are short and rounded.

I never heard my bird utter a sound in the garden. When being fed in a large cage it would utter a very soft low whistle, audible only to those quite near. Campbell says that it has a peculiar whining or whistling note, presumably the same note given in a louder tone.

The species is chiefly if not wholly insectivorous. I occasionally saw my bird pick up seed, but a captive bird will

often pick up a stray seed instead of grit. The formation of the bill is suggestive. It is straight and slim, the lower mandible being springy. The two mandibles, until pressure is applied, meet only at the tip so that, when an insect is seized, there is great pressure at the end, not only enabling the bird to cleverly seize and firmly hold its prey, but also to subject it to such pressure as quickly to kill it.

In captivity there is difficulty with the food, for my bird did not take kindly to artificial mixtures of any kind. Tiny cockroaches and mealworms it would take only too freely, but having once taken a mealworm it would hardly touch anything else, and it eventually died from the effects of a series of fits. When I heard how Mr. Peir fed his Ground-bird I felt that it could not live; and writing later to Mr. Carrick he says:—"Referring to your remarks about Mr. Phillipps' anxiety to obtain a pair of the Spotted Ground-Thrush, kindly inform Mr. Phillipps that I am sending him the specimen I possess, and which I mentioned in a previous note"; but in a further letter he says:—"I came home to get the Spotted Ground-Thrush to take down to the steamer on day of sailing and found it dead. It was in perfect condition, and Mr. G. examined it and like me is mystified as to the cause of death; its head was bent back on to the tail as if it had had tetanus." The too free mealworm diet unquestionably caused the poor bird's death. If I should ever succeed in obtaining another, I would endeavour to dispense with mealworms altogether, and feed it in the plainest manner. Live ants, *fresh* ants' eggs, earwigs, spiders, woodlice, &c., would probably suit the bird well, but these are practically unobtainable in London. It needs, also, more exercise than as a rule it is possible to give it in captivity.

Although always roosting in a tree, a point not mentioned by any writer, all the members of the genus seem invariably to nest on the ground. Campbell says of the Spotted Ground-bird's nest:—"Open or cup-shaped; somewhat loosely constructed of strips of hard grey outer bark, dead leaves, and sometimes grass; lined inside with finer materials—bark, grass, &c.; placed on the ground in a depression or hollow, sheltered by a stump, fallen branch, stone or tussock, in forest country. . . . *Eggs.*—

Clutch, two usually, three occasionally; oval or lengthened in form; texture somewhat fine; surface glossy; colour, dull-white, spotted and blotched with olive or umber and light or dull-grey, the markings being usually thickest at the larger end. The season commences with the early breeders in August or September, finishing with the late ones in December or January. Between these extreme dates probably two broods are reared." Wood says—"The young are able to run almost as soon as they leave the egg, and in two days their bodies are covered with a soft black down like that of the young water-hen." Can any one support this assertion from personal knowledge of the genus? How remarkably different from the Lyre-birds, of which the Ground-birds sometimes remind me!

Some of the colours of this species seem to fade after the death of the bird, notably that which I have called "slate" in my sketchy reference to the plumage, the Museum Catalogue generally substituting the word "grey" or ignoring it altogether. But it had a very real existence while my bird lived: and Mr. Peir, when describing his own bird, used the word rather more freely but occasionally preferring "lavender" and "lilac." I must also draw attention to a large and very conspicuous patch of bright blue-black (sometimes it looked pure but deep blue) on the shoulder and adjacent feathers (wing-coverts), the former set off with bold round white spots, the latter with less round white tips. Mr. Peir says—"The whole of the wing-coverts are a shiny black of very fine lustre spotted all over with pure white.

The sexes are different; and the adult female is thus described in the Catalogue:—"Similar to the male in general appearance, but easily distinguished by the orange-rufous patch on the hinder cheeks extending some distance along the sides of the neck, and by the ashy throat and dull whitish chin replacing the glossy black throat of the male; the grey chest-band is present, but is somewhat paler." The length of the bird is about 10 inches, and the colour of the iris "watery-black" or, as the Catalogue has it, "very dark lead-colour."

My story is long and rambling, but the spotted Ground-bird is an exceedingly interesting subject; and neither before nor since have I possessed any bird at all resembling it.

Five other species of *Cinclosoma* are known:—

(1)—The Chestnut-backed Ground-bird, *C. castanonotum*; New South Wales, Victoria, South, West, and North-west Australia; upper back brown like the head, scapulars and lower back maroon.

(2)—The Cinnamon-coloured Ground-bird, *C. cinnamomeum*; a dweller chiefly of the great interior; considerably smaller than either the Spotted or the Chestnut-back species, and may be easily recognised by the cinnamon colouring of the greater portion of its plumage. Fore neck white, separating the black throat from the black chest.

(3)—The Chestnut-breasted Ground-bird, *C. castanothorax*; South Queensland and towards interior provinces. Back entirely concolorous. Fore neck and chest chestnut.

(4)—Northern or Black-vented Ground-bird, *C. marginatum*; North-west Australia; fore neck and chest cinnamon.

(5)—*Cinclosoma ajax*; Western New Guinea; *male*—wing-coverts black without spots, sides of body orange; *female*—throat white, the lower throat, fore neck, and chest orange; *young male*—throat dusky brown, fore neck and chest orange.

The above from Campbell and the Museum Catalogue.

THE AUSTRALIAN BRUSH-TURKEY.

Catheturus lathamii.

By W. H. ST. QUINTIN, F.Z.S., M.B.O.U.

Surely amongst all the wonders of the ornithological world there is nothing more strange than the family of the Megapodiidae, in which we find the parental instinct, so conspicuously strong in the Avian Order generally, reduced to vanishing point.

When we consider that the Megapodes and Brush-Turkeys are content to leave their eggs to the sun-warmed sand, or to the fermenting mass of vegetable debris, we are reminded of their Reptilian ancestors of long past geological ages, and one is almost tempted to suggest that these strange habits, depart-

ing widely from those of all other birds, have been transmitted unaltered to these descendants inhabiting certain islands of the Malay Archipelago, of the South Pacific, and parts of the continent of Australia.

The Australian Brush-Turkey, *Cathartus lathamii*, is the best known of this family in European collections, as a living bird. It seems to be hardy, and easily kept. A newly-imported pair came into my possession in January, 1903, in good health but of course travel-stained, and in broken feather. They rapidly improved during the next three months, in an unwarmed shed, supplied with a variety of seeds, grains and nuts, and well bedded down with dry leaves and sand. On April 25th, I turned them out into a large enclosure. In the afternoon of the following day I found the male excavating a sort of trench on a bank under some large Scotch firs, a yard long, a foot wide, and some ten or twelve inches deep. I watched him for some time, and thought that he was hunting for insects and worms; but, by the next day, he had collected a heap, three or four large barrow loads, of dead leaves, and debris, on the spot where the trench had been. He was quite tame, and went on scraping at a few yards distance, merely leaving off to chase away any other bird that came too near, and returning to his task. This went on without intermission for some three weeks, in all weathers. On a wet day the poor bird presented a pitifully draggled appearance, as his heavy tail got much in his way, as he kicked the soaked rubbish up the slopes of the rapidly accumulating mound. The energy displayed was remarkable, especially when taking into consideration that the bird had been confined in a small shed, after a long voyage; and for many months had had no opportunity for exercise.

I soon had to enclose the mound and the two birds within some wire-netting, for the male became very aggressive, fiercely chasing off other birds, even male Capercaillies. Indeed I more than once saved one of these from an ignominious defeat. The Brush-Turkey used to chase a Capercaillie, and easily overtook it. He then used to give a tremendous thump with his heavy foot, making the feathers fly from the back of the fugitive; and evidently this form of attack proved very demoralising to the

larger bird, who never turned, but fled at his best pace. The female was always getting out of the enclosure, climbing up the bushes, and dropping down on the outside of the fence. The male was a rough wooer, and ran his mate about in a most unkind fashion. I sometimes thought that he intended serious mischief, but after hemming her into a corner, he would throw himself down before her on his chest pushing out his head and neck to exhibit his coloured wattle. Then the female, after getting her wind, would suddenly race swiftly past him, and gaining a yew tree, would jump from bough to bough till she gained a perch some twenty feet up, where she remained safe, while he went back to his labours.

When the mound had attained the height of about five feet, with a diameter of twelve or fourteen, he seemed satisfied, and was generally to be found mounting guard upon the top, only striding down in rather a stately fashion to meet me, with tail swinging and wattles displayed; and returning to his post after consuming the monkey-nuts, or hempseed, or other delicacy that I generally brought with me. We supplied him with mown grass from the lawns, and rough herbage, while he raked every scrap of loose material together off a space some thirty yards in diameter round the mound.

His challenge was strikingly like the distant bellow of a bull; and when he emitted the sound, the wattle on one side of his neck was distended to the size of a small melon.

On May 17th, I found the Brush-Turkeys much excited, the male was running up and down the wire-netting, with wattle fully displayed, every now and then dashing off to the top of the mound, then back to the hen (unfortunately at that time outside the enclosure) trying to tempt her to it. A friend and I tried to let her in, and of course the male being the bolder of the two got out, and then followed a desperate chase! The hen ran for her favourite tree, and for the first time I saw him follow her off the ground, displaying his wattles. I could see that the hen was not seriously alarmed, and here of course I ought to have left them, but for the sake of other valuable birds I was obliged to get him safely back into the enclosure; and left

her outside, up the tree. We found on visiting the mound that there was an open trench on the top, say two feet by one foot, by one foot deep, evidently to admit the hen for laying, and *the work of the male alone* which is interesting. The heat of the interior of the mound at this time was very perceptible to the hand, though I regret that I did not test it with the thermometer. (Von Rosenberg found that the thermometer marked 93 deg. Fahr. in the interior of the mound of another species of Brush-Turkey, *Talegallus fuscirostris*, while the surrounding atmosphere was only 85 in the shade. Workers of incubators will recollect that the temperature required to hatch the egg of the domestic fowl is 104 deg. Fahr.)

And now the female began to moult and the chance of eggs for the season passed away. It seems highly improbable that in such a miserable summer any chicks could have survived, even if the mound retained its heat sufficiently long for the incubation period. At the Zoological Gardens last summer a young bird, I learn from Mr. Thomson, did leave a mound, but did not live long. But some forty years ago chicks were reared in Regent's Park. They looked after themselves directly they left the mound, the parents taking not the slightest notice of them. They could fly at once, and went up to roost at night, and grew so rapidly that in three months there was very little difference between the old and young birds.

My birds are in fine order now, and the male already seems inclined to go to work, but I hope that breeding operations may be deferred till the end of April at earliest; so until that time I shall supply no material.

I hear that our fellow member, Mr. Capern, has more nearly approached success, for eggs were found in a heap raised by his birds; but probably the low temperature of the season accounted for their failing to hatch.

With regard to the food for young birds, Gilbert found that a newly hatched chick of Duperrey's Megapode fed at once on bruised Indian corn. I should offer custard, ants' eggs, soaked seeds and grain of various sorts, and raisins and any available fruit, also small earthworms.

FOREIGN BIRDS AT THE "GREAT NATIONAL" SHOW.

A few years ago the only cage-bird show held during the year at the Crystal Palace was the "Great National," at the end of January or beginning of February; then the foreign bird section, as a rule, was well worth going a long way to see, which can hardly be said of the show held from January 29th to February 2nd last; but when it is remembered that two large shows had been held in the same building within the preceding three months it was hardly to be wondered at that one saw practically nothing that one had not seen at the Palace before. The show, so far as foreign birds were concerned, was certainly not up to the average, and not to be compared with the one held in December last.

In the Parrakeet Class, Mr. Hawkins' Varied Lorikeets (*Ptilosclera versicolor*) were again conspicuous, though one of them appeared to the writer to be somewhat out of sorts. Of course they took the first prize. Second came the only bird we do not remember to have seen before on the show-bench, namely a Red-bellied Conure (*Pyrrhura vittata*), well shown by Mr. Osbaldeston. Like most of the Conures, this species is fond of uttering a most ear-piercing and irritating shriek. There were other good birds, such as Kings, Red-wings, Pennants, and Swainson's Lorikeets, but nothing else of any rarity. Amongst the large Parrots, Dr. Lister's now famous Banksian Cockatoo was again the best bird. There were three Macaws and several Amazons and Greys.

In the Class for rarer Waxbills, Mr. Hawkins' three rare Firefinches, *Lagonosticta niveiguttata*, *L. vinacea* and *L. rufopicta* were conspicuous. There was also a Bicheno-Zebra Finch hybrid, and Mr. Osbaldeston's Crimson-finch (*Neochmia phaeton*) was one of the finest of its kind we have seen. A Red-headed Finch (*Amadina erythrocephala*) was also worth notice. Mr. Frostick sent a good pair of Trumpeter Bullfinches (*Erythrospiza githaginea*) and Mr. Hawkins a couple of Olive Finches (*Phoni-para olivacea*).

In the Class for Tanagers, Sugar Birds, etc., Mr. Townsend as usual took the prizes. First came his magnificent Yellow (*Calliste flava*), second his Tricolor (*C. tricolor*), third his fine *Chloropsis hardwickii*. Fourth came the same gentleman's White-capped Tanager. Mr. Hawkins received an extra third-prize for a fine cock *Dacnis cayana*.

The Class for all species not included elsewhere contained an interesting assortment. Mr. Osbaldeston took first prize with a magnificent Purple-headed Glossy Starling, Mr. Fyfield second with his Senegal Touracou, Mr. Osbaldeston third with his Toucan, and Mr. Townsend fourth with an Andaman Starling, Mr. Harper's Great Weaver (*Ploceus megarhynchus*) was out of colour, but was nevertheless well worth a card, and the same gentleman's Grey-winged Ouzel received a V.H.C.

MY AVIARY.

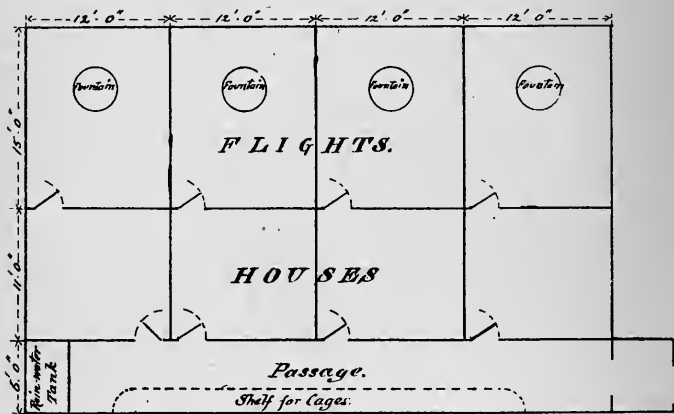
By C. CASTLE-SLOANE, F.Z.S.

A short account of my new aviary may be of some interest to our members ; it is 48ft. long and 32ft. wide. The houses are built of brick ; and the roof is formed in two parts, the back part being higher than the front, so as to allow sufficient light for the cage birds which are kept on a shelf at the back. The roof is a rafted one, match-boarded with felt and zinc above, which is painted green ; it makes it warm in winter and not too hot in summer. The flights are constructed of iron standards, the wirework being light straight wired bird lattice (not the ordinary wire netting), attached to iron standards, fixed in brickwork which goes all round, making a shelter for the birds when they are on the ground, the latter being paved with large flags, which is quite as good as cement, if not superior ; as the latter, if not properly laid, is apt to crack and break up ; and should you have fountains (which I have) it is far better to pull up the flags to see to the pipes, if necessary, than to break up and repair the cement.

Planted in the flights are weeping willows, laurels, briars,

etc., and I have four fountains, one in each compartment, round which I put stone-work, ferns, primroses, etc., and groundsel for the birds.

To see the fountains in full play in the summer with the birds flying through the spray and others bathing in the basins, is a pretty sight. The rain-water from the roof is collected into a tank which is placed inside the aviary, and this supplies the fountains. Half of the top of the flight is covered with duroline, the same material as was used on the roof of the Royal Aquarium. Each flight is 15ft. by 12ft.



PLAN OF Mr. CASTLE-SLOANE'S AVIARY.

Dividing the flights from the houses is a wall about 4ft. high with 6ft. of glass above it, making the total height 10ft. There are two windows, which can be opened or closed as desired, in each compartment. Strawson's patent glazing is used, no putty being needed, and any of the panes can be replaced in a very short time; in fact, if necessary, in the summer time the whole of the glass can be removed, thus leaving the aviary open in front. The doors are half glass and half wood; all the glass is protected by wire netting on one side. Firs and other branches are hung up, the Doves and other birds taking full advantage of them. The seed is supplied in trays and Abrahams' seed hoppers.

Each house is 12ft. by 11ft., divided by wirework (light

bird lattice, straight wired), whilst at the back, the whole way along, dividing the houses from the passage, the same wirework is used. All the doors are opposite to one another, and no wooden or brick partitions are used. The birds can therefore see anyone who enters the aviary, and are not frightened as they would be if opaque partitions had been used.

A small greenhouse is first entered before the six feet passage can be reached, this being divided from the aviary by a door which prevents any stray bird escaping.

A 2ft. 6in. shelf runs along the length of the brick wall at the back for the cage birds, and underneath this are kept the various bins for storing the seed, etc. At the far end of the aviary is the rain-water tank above referred to, which supplies the fountains; and from a tap one can obtain water for the other birds. The tank is placed inside to keep the water from freezing and to take the chill off. The aviary is heated by a stove, the pipe of which runs straight up causing a splendid draught; and the joints being air-tight, fumes are prevented from escaping, and the aviary is kept in a nice temperature during the frost.

I have to thank Dr. Butler and Mr. Wiener for their valuable suggestions as to the design of this aviary, which I have taken full advantage of.

Among my collection of Doves I have Red Mountain, Wine, Rufous, White-fronted (which have bred), Smith's, Spotted, Pigmy, Geoffroy's, Scaly, etc.

I am in hopes that my Weavers will turn out successful. In another compartment I have a collection of British birds, and on the shelf I keep my special pets such as a Malabar Green Fruit Sucker (which feeds from your hand), Yellow-winged Sugar-bird, Scarlet Tanager, etc.

To make the aviary more attractive to bird and man it is surrounded with rose-beds and other bright flowers. The air is very fragrant, owing to a belt of pine trees which in the summer give a partial screen to the birds and in the winter keep off the east wind. The aviary faces South.

STRAY NOTES.

The first series of *Notes on Cage Birds* (1882) seems now to be a decidedly scarce book, and we doubt whether many of our members possess copies; it contains, however, some very interesting records of the achievements of British aviculturists of some twenty-five years ago. The various letters are mostly signed by initials or *noms-de-plume*, and no dates are given. One writer tells of the arrival of a fine and healthy stock of the Swift Lorikeet (*Lathamus discolor*), several of which he himself kept and found that they lived well on a diet of seed, boiled rice sweetened with honey or sugar, and green food, though they appeared to do equally well on seed alone. When shall we have an opportunity of studying this beautiful species again?

Another writer tells of the unsuccessful nesting of a pair of Carolina Coueures (*Conuropsis carolinensis*), a species which, unfortunately, appears to be fast approaching extinction. In going round his aviaries one morning Captain Nicholl discovered an egg in a corner behind a dead stump of a tree, which he describes as about the size and colour of a pigeon's. The following morning there was a second, and on the next two mornings a third and a fourth.

"During the time the eggs were being laid the cock Carolina did not go near the nest, but, from the fifth day, he, together with the hen, sat continuously. The two birds never left the nest, except to feed, for three weeks, not even moving when their food was brought to them in the morning; so I fully expected to see, some day, young birds instead of eggs, but I was disappointed, and, on examining the eggs found they were all addled."

Again referring to this interesting collection of letters on avicultural matters, we find an account of the successful breeding in captivity of Swainson's Lorikeet (*Trichoglossus novæ-hollandiæ*), which makes the second authentic instance we are aware of, of young of this species being reared to maturity in this country; the other being the now well-known case at Blackpool.* The pair of "Blue Mountains" were kept in a small aviary of which they were the only occupants, and their owner remarks:—"For nesting, I had a box 14in. long, 9in. high, 10in. wide, into which I fitted a cork spout, the length of the box; at one end a hole was cut, and all round covered with cork. The first indication of nesting commenced in February, and in about twenty-one days I heard the young were hatched. At the end

* *C.f. Avic. Mag.* Vol. VIII., p. 167.

of five weeks they forsook the nest. In June the old birds laid again, but whether the cock assisted the hen in incubation I cannot say for certain, having but little opportunity of watching their doings, but I am under the impression he did."

Little is known regarding the nesting habits of the Varied Lorikeet, so that the following note which we extract from the January number of our esteemed contemporary the *Emu* will be read with interest:—

"It may interest ornithologists to hear that I saw two broods, three and four respectively, that were taken from their nests—hollow spouts in trees, I understand—about the 15th September; they had been in hand a week when I saw them, and the oldest lot would, I should think, just be able to fly a short distance had they had their liberty. They appeared to differ but little in their plumage from adult birds, excepting that the red crown was entirely wanting; three individuals, though, showed the first indications of it by a narrow band of red across the forehead. They were thriving on a mixture of oatmeal and honey. These birds were obtained on Cambridge Creek, some 30 miles north of Richmond township, Flinders River, North Queensland.—Fred. L. Berney, Richmond (N. Q.)"

Another writer in the last-mentioned journal gives the following note on the Painted Finch (*Emblema picta*):—

"I caught a number of Painted Finches in the M'Donnell Ranges by snaring them with a single horsehair, but for some unaccountable reason they all died with the exception of one within 24 hours. I obtained all the native grass-seeds and had the ordinary shop-seeds as well, took every possible care of the birds, but they died so rapidly that I gave them up in despair. The single bird I brought down to Adelaide, and it is thriving in the open-air aviary. There was a nest not ten yards from my fireplace when I left the camp. The eggs are white, and the nest, the coarsest of any Finch I know, one peculiarity of it being that a number of pellets of clay are used in the foundation. I watched the nest built from the first stick. Small sticks were used more than grass, and the nest is much smaller than that of any of our ordinary Finches. Horace J. Page, Mitcham (S. A.), 15/10/03."

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

The following is a list of the birds received during the month of January 1904 :

JAN.	5.	1	Raven (<i>Corvus corax</i>)	..	British Isles.
"	8.	2	Sulphury Tyrants (<i>Pitangus sulphuratus</i>)	..	S. America.
"	13.	1	White-backed Piping Crow (<i>Gymnorhina leuconota</i>)		Australia.
"	14.	3	Impeyan Pheasants (<i>Lophophorus impeyanus</i>)	..	Himalayas.
"	14.	2	Rufous Tinamous (<i>Rhynchotus rufescens</i>)	..	Argentina.
"	14.	1	Ring-necked Parrakeet (<i>Palæornis torquata</i>) ♂	..	India.
"	20.	2	Herring-Gulls (<i>Larus argentatus</i>)	..	Europe.
"	22.	1	Barn Owl (<i>Strix flammea</i>)	..	British Isles.
"	22.	2	Waxwings (<i>Ampelis garrulus</i>)	..	Europe.
"	26.	1	Crown Hawk-Eagle (<i>Spizaetus coronatus</i>)	..	Africa.
"	26.	1	Philippine Hornbill (<i>Penelopides affinis</i>)		Philippine Islands.
"	27.	1	Rough-legged Buzzard (<i>Archibuteo lagopus</i>)	..	Europe.
"	27.	1	Hybrid Chilian Pintail (bred between <i>Dafila spinicauda</i> and <i>Pœcilonetta bahamensis</i>)		
"	28.	2	Kestrels (<i>Tinnunculus alaudarius</i>)	..	British Isles.
"	29.	2	Blue-and-Yellow Macaws (<i>Ara ararauna</i>)	..	S. America.
"	30.	1	Blue-rumped Parrakeet (<i>Psittinus incertus</i>)	..	Malacca.

The Philippine Hornbill was presented to the Zoological Society by our member Mrs. Johnstone, and is the first example of this rare species received by the Society. The Blue-rumped Parrakeet has not been represented in the collection for some thirty years. It is a somewhat uninteresting-looking bluish-green bird, which feeds, Mr. Davison tells us, "on the small gummy flowers of a plant that always springs up where forest has been felled and burnt. It goes about in small flocks of fifteen or more, and is not at all shy or wild."

CORRESPONDENCE, NOTES, ETC.

DIAMOND FINCHES, YELLOW SPARROWS, ETC.

SIR,—Can you tell me of any means of both preventing and curing baldness in Diamond Sparrows?

Another member has sent me a Diamond hen to see whether change of place, food, etc., will help her. She is very bad, the feathers gone from both head and neck, making her look exactly like a Vulture, and she has been in this condition for some time. Would warmth or cold be best for her? She has been, and is, in an indoor aviary, but mine in which she now is, is in a conservatory, warmed at night.

One of my own Diamonds, who has reared nestlings this year, also shows signs of the same trouble the last few weeks. They are not together.

Can you tell me the difference, if any, in the appearance of cock and hen Golden Sparrows?

I bought mine in the summer from a dealer who had several, some with white, some with black beaks. He told me they came from California, and the colour of the bill was the distinguishing mark of sex.

I, of course, bought a "pair," hoping they might nest, but now *both* bills are black. I suppose the white bill must have been a young one. Is there any difference, or are the sexes alike? They are so shy that it is hard to watch them at all, but one or perhaps both sing a loud sparrow-like song or twitter.

I am hoping in the spring to have an outdoor aviary, a very simple one, more for summer use than anything else, but with plenty of bushes. Could I put Pileated Finches there? And would it be any use having Weavers among small birds such as Bichenos, Lavenders, etc. I have never but once had a Weaver on account of their bad character, but if there was any chance of their nesting out of doors I should like to try them. Are they hardy enough to remain out in the winter?

My indoor space is limited to two aviaries, one holding Bichenos, Waxbills, etc., the other Gouldians, Longtails, Masked Finches, etc. Though we have so little room we generally get some broods during the year, but our luck was bad last year: only two Gouldians, two Diamonds, a dead Bicheno nestling, and a nest of Longtails. The Cordons built a pretty nest, laid one egg, and sat most carefully, but nothing came of it.

L. WILLIAMS.

The following reply has been sent to Mrs. Howard Williams:

There may be two explanations of bare heads in the "Ornamental

Finches" (Prachtfincken as the Germans call them). Either the bareness is due to one bird plucking the other under the pretence of preening its feathers, or some error in feeding has brought on a disease known amongst bird-keepers as "surfeit."

The cure for the former is separation, and a change of partners after the plumage has recovered; the treatment for the latter is—cage the patient by itself; for one day only dissolve five grains of Epsom salts and five grains of chlorate of potash in a wineglassful of warm water, and give the mixture as the day's drink; supply plenty of green food, but otherwise feed as simply as possible.

Warmth is best for the recovery of feathers.

You could turn out Pileated Finches in the summer; but, whatever you do, don't trust Weavers with any little finches which you value (I have tried them with disastrous results); sooner or later the weaker birds will be found with their heads completely skinned and their backs bare and bleeding.

I only tried with Fire-Weavers, sometimes called "Bishops," but the species of *Hyphantornis* or *Ploceus* would be worse if possible.

Both Golden and Yellow Sparrows differ considerably in the sexes, the upper parts of the female being pale brown.

A. G. BUTLER.

A WHITE-TAILED WHYDAH.

SIR,—That intrepid Italian traveller, Major Casati, "during his sojourn in Equatoria, met with a variety of the Whydahs, of which I am unable to find an account in any of the ornithological works to which I have access.

He gives it the name of Mandolongo and states that in the Mambetta country it is held sacred, and it is regarded as a crime to kill it.

It is caught by nets and two long *white* feathers are plucked from the tail after which the bird is allowed its freedom.

The feathers form part of the regalia of the king, and a severe punishment is inflicted upon anyone who attempts to infringe the prerogative.

Has this bird ever been imported to this country, and if so under what name?

ARCHIBALD SIMPSON.

SIR.—On receipt of the above letter I wrote to Mr. Simpson to inform him that I knew of no Whydah with white tail-feathers; but that I would communicate with Captain Shelley the author of the "Birds of Africa," who would certainly know whether such a bird had been recently described.

Captain Shelley replied as follows :—

“The bird you refer to in your letter of the 14th is most probably *Vidua (Linura) finschi*, Reichen, J. F. O. 1882, pl. 2, fig. 1. There is no other Weaver-bird with white tail-feathers. The species ranges over Eastern Equatorial Africa, between 6° S. lat. and 11° N. lat. or from the Usequa country to Shoa. No native name has yet been recorded for the species. I should not be surprised if the chiefs use the four buffy-white centre tail-feathers as ornaments, but this has not yet been published.”

To this I append the following remarks :—

In the Museum Catalogue the four central tail-feathers are described as *straw-coloured*; and, as you only mention two long *white* feathers in the tail, I was unable to recognize the species; but you will see that, if the account is authentic, this must be the bird intended. It has never been imported alive.

A. G. BUTLER.

FOOD FOR NESTLINGS.

SIR,—For some years I have been giving my birds, both foreigners and Canaries, hard boiled eggs and breadcrumbs during the nesting season. Year after year, the death rate among the nestlings has been very high in spite of all my care. Believing that this was due to adulteration of the bread, I have substituted this season Spratt's Dog Biscuit finely powdered, and the result has been most satisfactory.

One of our members told me some time ago that he had reared a nest of hybrids on this food, and as I had already proved its value for newly-hatched Pheasants it seemed worth while to try it.

At first the birds did not like it at all, but finding no other soft food in the aviary they took it as their young ones hatched, and fed the nestlings on it. They did not, however, seem to eat much of it themselves, and perhaps this is one reason why I have had so few invalids this summer.

My four Canary hens have fully reared 32 strong young birds, a pair of Ribbon Finches have reared nine young birds since September, and my White Java Sparrows have three strong young ones nearly ready to leave the nest. The Ribbon Finches lost only one young bird in the nest, and this was the only one hatched in their second nest. Two fine young cocks died about a fortnight after they left the nest, and No. 9 flew before her flights were strong and was drowned in a heavy rain: The others are all hens but one, and seem strong, healthy little birds. Two pairs of Zebra Finches in the aviary have eaten the same food with apparent appreciation, but though they seem to enjoy life very much are by no means keen on undertaking the cares of a family. Rough nests have been built but no eggs laid. I

cannot, however, blame the food for this, as three pairs last year behaved in a similar manner. My three young Javas are almost entirely grey, though their parents are pure white. This seems a usual thing with these birds.

E. BRAMPTON.

— — —

THE MANDARIN DUCK.

In reply to an inquiry, the following letter has been forwarded to Mrs. Roberts, of Tasmania.

I am very glad to be able to help any one in raising Mandarins, but am sorry to hear Mrs. Roberts has such trouble in getting a drake. Has she tried the Melbourne Zoo? or are there no steamers running from Chinese ports to Tasmania? They have these birds in Australia I know. If she cannot get one there, it would not be difficult to send one out if some one would care for it on the way, as the Mandarin is easy to get and bears travelling well.

The ducklings are best left to be hatched and reared by the mother, if a pond abounding in natural food and protected from vermin be available. If not, the eggs can be given to a small motherly hen, and the young reared in a pen or covered run. If in the former, the sides must be smooth, as these ducklings can and will climb like rats. For food they need hard-boiled egg and bread crumbled together, with duckweed and small worms, or, in default of the two latter, chopped lettuce and minced tender raw meat. Bread-and-milk should be avoided, as, though good for other ducklings, milk is unsuitable for these. A sunny place is good for them in Europe, but in Tasmania they would no doubt need to be guarded against too much heat. They are also liable to suffer if allowed to get wet in captivity during the first week or two, but here again a warm climate would no doubt make a difference. If well cared for at first, they are not hard to rear in confinement, but of course they would have a better chance in freedom. I am sorry I did not say anything about rearing ducklings in my additional notes on Carolinas,* but the above may perhaps be of use. They ought to take up both species for acclimatization in Tasmania; and, if they could get Mandarins direct from China, as I believe they do in Australia, these would be better stock to start with for either turning out or breeding from than European specimens bred in captivity.

FRANK FINN.

— — —

VIOLET-EARED WAXBILLS, PECTORAL, AND GOULDIAN FINCHES.

SIR,—A pair of Violet-ears made a nest in a small covered box at the beginning of January, the hen laid two eggs in the nest and several, I fancy,

* See our last issue, p. 139.

on the ground. After sitting for three days she deserted the nest, but they have now made another one and have two eggs. The eggs are pure white, about the size of those of Gouldians. The Pectoral Finches also have a nest, the hen sits for hours and is then off for hours, so the egg—they broke all but one—will come to nothing. Two of my hen Gouldians have died within a week, they would go on laying. Do you think that Gouldians bred in Europe would be more likely to breed in the summer? The cock Gouldians are in splendid condition, and so are the young birds bred last autumn.

PORTUGAL.

R. S. VIVIAN.

The following reply has been sent to Mrs. Vivian :

I doubt whether the fact of Gouldian Finches being born in Europe would prevent their trying to breed in the winter.

Australian Grass-finches seem to be ready to breed at all seasons, whether they have been newly imported or have been born here.

As Gouldian Finches seem to be exceptionally liable to egg-binding, it would be better to keep them caged and without nesting material during the winter.

A. G. BUTLER.

WHITE-EARED CONURES NESTING.

SIR,—I was obliged, some months ago, to locate my pair of White-eared Conures in a small garden aviary by themselves owing to their pugnacious habits, and they have now started nesting; the hen sitting most attentively on four eggs in half a cocoanut husk placed in a small box. The birds are being fed on canary seed, millet, hemp, and sunflower seed, with a little ripe apple or other fruit daily, and I am anxious to know if, in the event of young being hatched, you could suggest any addition to this bill of fare.

Also would you kindly say if there is any instance on record of these birds having been successfully bred in captivity.

D. MORSE.

The following reply was sent to Mr. Morse :

It is a great pity the birds did not wait until warmer weather, as I am afraid there will be little chance of rearing the young, if they should hatch, unless it should be exceptionally mild. The only addition that I can suggest to the food you are giving is soaked stale bread, which most Parrakeets take to readily and appreciate much when they have young to feed. It should be soaked in cold water for about a minute and then squeezed nearly dry.

Of course, groundsel and chickweed are excellent, if obtained fresh in the spring and summer, but I should hesitate to give them at this time of year even if obtainable.

White-eared Courees have frequently laid in captivity, and there is at least one case on record of young being hatched, but not reared. I know of no case of *successful* breeding, though as the species is not rare I think it is very probable that young birds may have been reared, but there is apparently no published record of such an event.

D. SETH-SMITH.

CROSSBILLS.

The following reply was sent to a member's query :

I don't see why Crossbills should not breed in an aviary with some Scots fir boughs, or a young tree or two with bushy heads and well-leaved boughs. They are very early breeders. There is no time to lose. I certainly never heard of young being reared in captivity. I should think they will certainly be fed for the first fortnight at least on insect food. I suppose the indispensable meal-worm would be required, if young were hatched? Also any small caterpillars that could be obtained. I wonder if anybody in difficulties with newly-hatched insectivorous birds ever tried small silk worms?

My White-winged Crossbill was not destructive in the wood and wire aviary in which he was over a year. But I recollect that the common bird in a cage was very restless, and twisted the wires out of place. In an aviary plenty of fir cover (Scots fir and *larch*) might keep them occupied.

W. H. ST. QUINTIN.

HYBRID MUNIAS.

PRINTER'S ERROR.

An unfortunate printer's error crept into the note under the above heading in our last number. Dr. Butler is made to say "the indistinctness of *M. ferruginosa* as a species is generally admitted," whereas what he wrote was "the *distinctness* of *M. ferruginosa* as a species is generally admitted."

THE SOCIETY'S MAGAZINE.

Last year the Committee ventured to try the experiment of issuing twelve coloured besides many other plates (which was rendered possible by the great generosity of the Honorary Business Secretary and Mrs. Phillipps), and a really beautiful volume has been the result ; but the experiment was hardly successful from a financial point of view. In the present volume, therefore, it is proposed to give about eight coloured plates besides perhaps a few uncoloured, so as to reduce the expenditure to the amount of the Society's income. It must be remembered that even eight coloured plates is a greater number than has ever before been issued, with the exception of last year. But although the Committee is resolved on economy, the needs of future volumes will not be in any way neglected, and coloured plates will be in readiness for the new year by the time the old shall have expired.

We may take this opportunity to urge all members who have not yet paid their subscriptions (which should have been paid *before the first of November* last), to do so at once, so that their names may not have to be struck off the list ; and we would also remind members how greatly they can help the Society and improve the Magazine by introducing new members.

Referring to the Rules governing the *Post Mortem* Examinations, it will be noticed that if a reply is required by post a fee of 2/6 must be sent with the bird. We should like to mention that Mr. Gill very generously hands this fee over to the funds of the Society.

THE EDITOR.

POST MORTEM EXAMINATIONS.

RULES.

Each bird must be forwarded, as soon after death as possible, carefully packed and postage paid, direct to Mr. ARTHUR GILL, M.R.C.V.S., Veterinary Establishment, Bexley Heath, Kent, and must be accompanied by a letter containing the fullest particulars of the case. Domestic poultry, pigeons, and Canaries cannot be dealt with. If a reply by post is required a fee of 2/6 must be enclosed.

INDIGO BIRD (Miss St. Quintin). [Your bird died of apoplexy. An exceptionally extensive extravasation of blood on the brain].

ZEBRA FINCH (Mr. H. B. Rathborne). [Your bird died of acute enteritis].

TANAGER (Rev. R. H. Wilnot). [Your bird died of acute pneumonia, but the last attack was evidently very acute as shown by refusing food and dying so quickly].

RED-LEGGED PARTRIDGE (The Duchess of Bedford). [Apoplexy was cause of death. It is by no means uncommon to see healthy birds attack one that is injured or in a fit].

CALIFORNIAN QUAIL (Mrs. A. K. Connell). [Your bird died from heart failure. It was a mere frame, the emaciation being extreme. There was extensive tubercular deposit in the mesenteric glands].

ZEBRA FINCH (Miss H. K. O. Walker). [Death was due to inflammation of the oviduct caused by a ruptured soft egg, the outer covering of which being retained set up the inflammation referred to. If this had been diagnosed and carefully removed with a small pair of forceps she might have recovered].

CORDON BLEU AND ZOSTEROPS (Miss E. E. West). [Your bird died of pneumonia and in all probability your suggestion as to the cause is correct. Reply sent by post, fee 2/6, received with thanks].

WAXWING (Mr. W. H. St. Quintin). "I have lost several during the last few weeks, some three or four like this one newly-imported, but previously I lost two I had in my possession over twelve months. Symptoms: drooping for two or three days and in some cases scouring. Fed on ants' eggs, potato and a little preserved yolk of egg, currants and sultana raisins. I generally give my Waxwings wild berries, elder, and hips and haws, but there have been none this year. It points to some defect in feeding or damp I think." [The *post-mortem* of your bird reveals no disease further than general wasting and consequent anæmia. The pale coloring referred to is the result of debility. Your opinion as to defect in feeding is doubtless correct. I have kept many Waxwings, but with an opposite experience to yours. Mine were fat as butter and all died in perfect plumage in a fit. I never lost one through wasting. I think that owing to the want of natural food in the form of berries, etc., some more fattening food would have helped them. Doubtless, those lately imported were too far gone before you received them. I certainly think the bad weather has had something to do in keeping back birds already debilitated and prevented them from accommodating themselves to an unnatural diet].

MASKED FIREFINCH (Mr. N. B. Roberts). [Pneumonia].

MASKED FINCH (Mrs. Howard Williams). [Your bird died of a direct injury to the heart. It had evidently swallowed a very small pin, which had penetrated the œsophagus and the point was touching the heart, and there was a large blood clot in the thoracic cavity].

NOTICES TO MEMBERS—Continued.

WANTS.

(These are charged for at the same rate as Birds for Sale).

Pair Burmese Peafowl; hen Redrump Parrakeet.

Lady M. SPICER, Spye Park, Chippenham.

Parrot Finches, Cuban Finches, Gouldian Finches—pairs or single birds.

Miss PEDDIE WADDELL, 4, Great Stnart Street, Edinburgh.

Adult hen *Zenaida aurita* Dove, tame, healthy; adult cock British Turtle-Dove.

IVENS, 12, Church-Road North, Hanwell.

Hen Barraband, cock Rock Peplar, hen King Parrot, hen Turquoise, pair Parrot Finches, hen Gouldian, Red-head Gouldians pairs.

WM. R. FASEY, The Oaks, Holly Bush Hill, Snaresbrook.

Cocks—Pennant and Crimson-wing Parrakeets, Virginian Nightingale, Chinese Painted Quail.

Lady MORSHEAD, Forest Lodge, Binfield, Berks.

Cocks—Two Pintail Whydahs, two Paradise Whydahs, three Orange Bishops, two Napoleon, two Grenadier Weavers, one Alario Finch, two Green Singing-finches, one Desert Trumpeter Bullfinch; pairs—two pairs Combassous, one Lavender Finches, one African Fire-finches.

GEO. CARRICK, "Stratford," Argyle Road, Saltcoats.

Pair Jungle Bush-Quails (*Perdica asiatica*), or Rock Bush-Quails (*P. argoondah*).

L. SETH-SMITH, Alleyne, Caterham Valley.

Cock Spice Finch, *Munia punctulata*, from outdoor aviary.

LEONARD W. HORTON, Longfield, Bescot, Walsall.

Hen Black-headed Siskin, two hen Pileated Finches.

Mrs. WILLIAMS, Hamilton Lodge, Bickley.

Hen White Java, hen Parson Finch, hen White-throated Finch, two hen Indian Silverbills, pair Yellow Budgerigars.

ELLIS, 34, York Street, Wakefield.

Cocks—Redrump, Cockatiel; hens—Rosella, Madagascar Lovebird, Budgerigar; pairs—Virginian Nightingales, Budgerigars. Must be from unheated outdoor aviary.—Mrs. FOGG-ELLIOT, Staindrop, Darlington.

Hen Redrump, pair adult Pennants, cock Virginian Nightingale, hen Mealy Rosella, Green Bulbul, hen Blue Robin, Shâmas, also several other good birds. Write stating prices, etc.

BURGESS, High Street, Bushey.

Avicultural Magazine, a set (Vols. I.—VIII., or I.—IX.); also Vols. I., III., and IV.; state condition and price; also No. 28 of Vol. III. and Nos. 39 and 40 of Vol. IV.

R. H. PORTER, 7, Princes Street, Cavendish Square, W.

Hen Violet-eared Waxbill, hen Ringed Finch, cock White-eared Grassfinch.

R. PHILLIPPS, 26, Cromwell Grove, West Kensington Park, London, W.

Notes on Cage Birds, first series (1882). Hen White-fronted Dove (*Leptoptila jamaicensis*).

D. SETH-SMITH, 14, Canning Road, Addiscombe, Surrey.

NOTICES TO MEMBERS—*Continued.*

Perfect cock Diamond Finch, been in outdoor aviary all the winter, 12/-, — wanted two hens; two hen Goldfinch mules 1/6.

M. HAWKE, Wighill, Tadcaster.

From outdoor aviary, four hen Budgerigars to exchange for four cocks, young healthy birds, full plumage.

Miss SHEPHERD, The Den, Walton on Thames.

One New Zealand (*Auriceps*) 40/-, Cockatiels 5/-, Blossom-heads 10/-, Rosellas 15/-, Ring-neck 5/-, hen Many Colour 40/-, each; Lineolated 35/- pair; two hybrids (Yellow-nape and Barnard) 40/- each, Mealy Rosellas 50/- pair—hen with faulty beak; hen Golden Pheasants 8/- each, cock Californian Quail 7/-, Bichen's 15/- pair, Pectoralis 15/- pair, Rufous-tailed Grassfinch 15/- pair, cock Diamond Sparrow 10/-, White Java Sparrow 6/-; African Waxbills, St. Helena Waxbills 5/- pair; Zebra Finch, Orange Cheek, Avadavat 2/6 each. The whole are in the finest condition, and have been in my aviaries for not less than a year, and are offered to make room for others.

WM. R. FASEY, The Oaks, Holly Bush Hill, Suaresbrook.

Hen Barnard Parrakeet, perfect, aviary bred, 30/-; cock Barnard, a little rough in plumage, very healthy, 25/-; hen Virginian Nightingale, perfect, acclimatized, 12/6; pair Lineolated Parrakeets, in perfect condition, 40/-; cock ditto, 18/-; Perfect Lorikeet, 25/-, and one all green (name unknown) 20/-, — these two have paired; pair Scarlet Lories (*Eos rubra*) 50/-; pair Blue-breasted Lories, 50/-; two pairs Green-winged Doves, 14/- pair; Wonga Wonga Pigeon, 20/-; two pairs Diamond Sparrows, perfect, 25/- pair.

Mrs. JOHNSTONE, Rougham Hall, Bury St. Edmunds.

One cock Diamond Finch, good health and condition, 6/-; three Bronze-winged Mannikins, bred in conservatory aviary, about three months old, just getting adult plumage—What offers? one Diamond Finch, believed cock, bred in conservatory aviary, absolutely perfect, age six months, 7/-.

Mrs. WILLIAMS, Hamilton Lodge, Bickley.

Healthy young Blue-fronted Amazon, has been in my possession fourteen months, 40/-; or exchange foreigners—Rosellas or Redrumps preferred.

M. E. GRIFFITHS, Fernside, Stowmarket.

Young pair of Gouldian Finches just showing the adult plumage 20/-, Wandering Tree-Pies 22/- each, Russian Goldfinches 4/6 each, Baya Weavers cage moulted 7/6 each, Californian Quails adult birds 16/6 pair, Brown-faced Conures 10/- each, adult Budgerigars 7/6 pair, hen Canaries 2/6 each, cock Saffron Finch 3/6, Green Glossy Starling 20/-, St. Andreasberg Rollers 10/6 and 12/6 each, splendid Blue and Gold Macaw good talker 120/-, also a splendid Jay says several words 15/-, also a few fine talking Amazons and a few small foreign finches; send for list.

H. W. BURGESS, High Street, Bushey, Herts.

(Continued on page V.)

III.

NOTICES TO MEMBERS—(Continued from page ii. of cover).

NEW MEMBERS.

- Lady SETON-STEUART; Touch, Stirling.
The Houblé. Mrs. HAMILTON; Dunmore Park, Larbert.
Mrs. A. A. DALE; c/o Messrs. King & Co., 9, Pall Mall.
Mr. R. I. POCOČK, F.Z.S.; The Zoological Society's Gardens, Regent's Park.
Mr. R. D. STEWARD; 6, Stanger Road, South Norwood.
Mr. H. L. BROOKSBANK; Walkington Park, Beverley.
Mr. E. C. STUART BAKER, F.Z.S., M.B.O.U.; Debrugarth, Assam.
Mr. HARRY MITCHELL; The Duchy House, Harrogate.
Mr. JOEL BLAMEY; Huasari, Andalgalá, Catamarca, Argentina.

HONORARY MEMBER.

- Mr. F. DUCANE GODMAN, D.C.L., F.R.S., F.Z.S., President of the British Ornithologists' Union; 10, Chandos Street, Cavendish Square, W.

CANDIDATES FOR ELECTION.

- Mrs. MELLOR; Fair Lawn, Lytham, Lancs.
Proposed by Capt. TWEEDIE.
Mrs. DENT BROCKLEHURST; Sudeley Castle, Winchcombe, Glos.
Proposed by The Countess of HAREWOOD.
Mrs. HART; Iveagh House, Measham, Atherstone.
Proposed by Miss BRAMPTON.
Mr. ALFRED J. DARLING; 52, Fore Street, Trowbridge.
Proposed by The Hon. Editor.
Mr. JOHN LANCASTER; Aslilawn, Rugby; and
Mr. WM. BARNFORD; Shorelea, Wellington Road, Oldham.
Proposed by The Hon. Business Secretary.

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The charge for private advertisements is one penny for every four words. Names and addresses of advertisers must be paid for. Each statement of price, such as 3/6, is counted as one word. Every advertisement must be prepaid, and MUST reach the Secretary not later than the 19th of each month. The Council reserve the right of refusing any advertisement they may consider undesirable.

Pair adult Budgerigars, breeding, 7/-; pair St. Helena Waxbills, 6/-; hen Grey Singing-finch, 4/-; cock Weaver, yellow with brown head (does not go out of colour) 10/-.

Miss PEDDIE WADDELL, 4, Great Stuart Street, Edinburgh.

Lady DUNLATH has two cock Silver Pheasants, four Silver hens, one Golden cock, one Golden hen—all 1903—for sale, 10/6 each:—address Housekeeper, Ballywalter Park, co. Down.

(Continued on opposite page).

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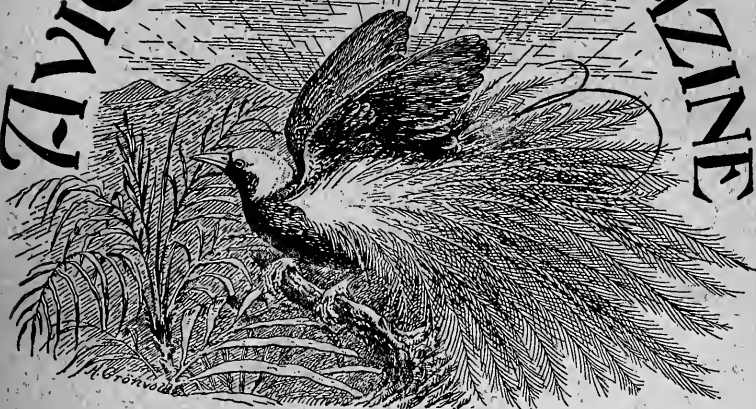
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THE JOURNAL OF THE AVICULTURAL SOCIETY.

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LONDON:

R. H. PORTER, 7, PRINCES ST., GAVENDISH SQUARE, W.

NOTE.—A new volume commences every November.

☛ All Subscriptions should be sent to the Honorary Business Secretary.

THE AVICULTURAL SOCIETY.



Persons wishing to join the AVICULTURAL SOCIETY are requested to communicate with the Editor.

NOTICES TO MEMBERS.

The Subscription to the Avicultural Society is 10/- per annum, due on the 1st of November in each year, and is payable in advance. The entrance fee is 10/6. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

All MSS. for publication in the Magazine, Books for Review, and Private Advertisements should be addressed to the Editor, Mr. D. SETH-SMITH, Glengarry, Canning Road, Addiscombe, Surrey.

All Queries respecting Birds (except *post mortem* cases) should be addressed to the Honorary Correspondence Secretary, Dr. A. G. BUTLER, 124, Beckenham Road, Beckenham, Kent.

All other correspondence, and Subscriptions, should be sent to the Honorary Business Secretary, Mr. T. H. NEWMAN, 20, Montpelier Square, London, S.W. Any change of address should be at once notified to him.

Advice is given, *by post*, by members of the Council to members of the Society, upon all subjects connected with Foreign and British birds. All queries are to be addressed to the Hon. Correspondence Secretary and should contain a penny stamp. Those marked "Private" will not be published.

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(Continued on page iii. of cover).

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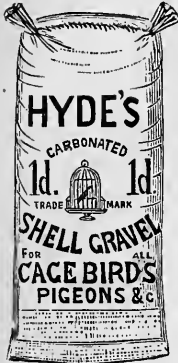
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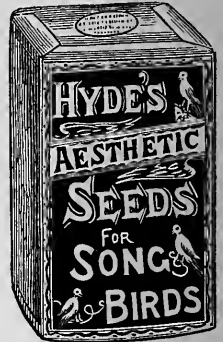
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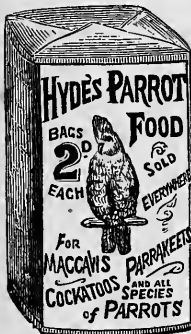


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I know it, I know it, I know it!

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WHITE-THROATED GROUND-THRUSH.
Geocichla cyanonotus.

A male in Mr Phillips' aviary.

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APRIL, 1904.

THE WHITE-THROATED GROUND-THRUSH.

*Geocichla cyanonotus** (*Cat. B. Brit. Mus. V. p. 172*).

Geocichla cyanonota (*Hand-list IV. p. 132*).

By REGINALD PHILLIPPS.

At page 147 of Vol. V. of the British Museum Catalogue of Birds, Mr. Seebohm commences the Subfamily of the TURDINÆ with the genus *Geocichla*, and remarks:—"The genus *Geocichla* comprises a well-defined group of forty † Thrushes, which may be distinguished as Ground-Thrushes. They are characterized by having the basal portion of the outside web of all the secondaries and of many of the primaries white, occasionally tinted with buff, but abruptly defined from the brown of the rest of the quills. The axillaries are parti-coloured, the basal half being white, and the terminal half black, slate-grey, or brown. Most of the under wing-coverts are similarly parti-coloured, but the relative position of the colours is reversed, the white portion being on the terminal half. This genus is connected with the genus *Turdus* through *T. viscivorous* ‡ and *T. mustelinus* §

"So far as I have been able to ascertain, the young in first plumage of every species in this genus are spotted on the back and breast; and I am not aware that the adult of any species has a scutellated tarsus, though traces of it are to be found in young

* *Geocichla cyanonotus* was unfortunately printed on our plate before the alteration in the Hand-list to *cyanonota* came under notice.

† Others have since been discovered.

‡ The Mistle Thrush.

§ The Wood Thrush of North America.

G. litsitsirupa *. Nor does any species seem to have a spring moult beyond the replacement of a few injured feathers."

And page 148 :—"No species of this genus is found in Europe or in South America, except accidentally on migration. On the other hand, it is the only genus of the family found in Australia"

Professor Newton, in his Dictionary, at page 961 refers to *Geocichla* as a phantom name, and at page 388 says :—"GROUND-THRUSH, a name long ago used for birds of the genus *Pitta* and its allies (Jerdon, *B. Ind. I.*, p. 502); but latterly an attempt has been made (*Cat. B. Br. Mus. V.* p. 147) to foist it on a composite group of some 40 species of Thrushes which have been referred to a ghost-like genus *Geocichla*, the characters and type of which continue to defy discovery." Since Vol. V. of the Museum Catalogue was published in 1881, the genus *Geocichla* has been revised, and many of the species then included in it have been gathered into other genera. In Vol. IV. of the Hand-list published last July, *Geocichla* contains but 28 species. Whether applicable or not, the generic names "Geocichla" and "Ground-Thrush" have come into such common use it will be convenient that they be retained, and that the latter be used only for birds of this group.

My own personal knowledge of the Ground-Thrushes is limited, and to what extent they are ground birds I cannot speak from personal observation. In the Catalogue Mr. Seebohm tells us :—"All the Thrushes are principally ground-feeders, especially in summer; but the species of this genus are *par excellence* Ground-Thrushes, being still less frequently found in trees than their near allies. Their legs and feet are strong, and pale in colour." Again, in the *Emu* (III., p. 82), Mr. Frank M. Littler, writing of the Tasmanian or Large-billed Ground-Thrush, *Geocichla macrorhyncha* (since removed from *Geocichla* to a new genus *Oreocichla*), a species peculiar to Tasmania, says :—"This Thrush seldom employs its wings, which are not really strong, but trusts rather to its feet. The rapidity with which it can get from place to place is really astonishing." But

* The South African Ground-Thrush, now in the genus *Psophocichla*.—R. P.

these things cannot be said of the White-throated Ground-Thrush without misrepresenting its nature. It is fond of the ground I admit, but is fonder of bushes and the boughs of trees at a moderate and medium height from the ground. Probably it keeps about as much to the ground as our English Robin does, though often mounting to higher boughs like our Song Thrush. When Mr. Grönvold made his first sketch of one of my White-throated Ground-Thrushes, he figured a bird on the ground. I protested. He urged that a Ground-Thrush should be figured on the ground to be in keeping with its name. I rejoined that this particular species should be figured in a tree to be in keeping with its habits; so on a tree it appears. It is also fond of sitting on stumps of trees, logs, rocks, and the like.

A true ground bird would be gifted with greater powers of running or fleetness of foot. *This species neither runs nor walks*, but progresses by means of hops. When on the ground, it proceeds rapidly forward for a short distance and then pauses, makes another quick advance and again stops, only when greatly pushed proceeding forward to any considerable though limited distance; when pursued or greatly alarmed, it certainly *can* scuttle along under the bushes with great rapidity, but not far—for very shortly, if need be, it takes to flight.

Probably I am quite correct in the conclusion I have come to that, *when undisturbed*, the White-throated Ground-Thrush prefers being *off* the ground except when feeding. It hops sedately from bough to bough, very leisurely and at infrequent intervals, but ceaselessly pouring out its gentle warble or louder and defiant song. It seems to be a very local and stationary species, and when undisturbed its movements are slow, measured, and dignified. But at the approach of man it drops to the ground, so as to hide its bright chestnut breast, for the upper parts lend themselves well to concealment in the solemn gloom of the forest. Each time it takes its short "run," it lowers its head so that the whole bird is parallel with the ground, but at each quick halt it stands erect, keenly alert and watchful; nevertheless all the time it assuredly knows full well the value of and puts trust in its protective colouring; and, as I have found over and over again, it is remarkable how easy it is to overlook

it even in my little aviary; it still further, and with much success, seeks to avoid being detected by skilfully manœuvring so as to place every available bush or tree between you and it. Probably it is from its customary habit of seeking concealment on the ground at the approach of man that it has unfairly earned the reputation of being a ground bird. Occasionally, but I think rarely, it will hide itself away in the hollow of a tree at a considerable height from the ground.

I have been asked—Is this species a true Thrush? The question is not an unnatural one when one remembers that genera so diverse as *Myiophoneus* and *Cinclosoma* are called Thrushes, even at our Natural History Museum where the latter is or was, to make confusion worse confounded, labelled “Ground-Thrush.” In our last number, at page 151, I made some remarks on this point. Names almost cease to be of value when used with such want of care. What object is gained by such lack of preciseness!!! So far as the subject of this article is concerned, it is a true Thrush. And I will discriminate and add that, in some of its habits ways and temper, it is more of a Robin than a Thrush. Although so truly Thrush-like, the bird of our illustration may in many respects be regarded as a great overgrown (and overfed) cock Robin.

It has been suggested, probably from a superficial similarity in the colouring of the two males in summer plumage, that this species may be akin to the Pied Rock-Thrush, *Monticola saxatilis*. But this is not the case. In their habits and general movements the two birds differ greatly. And especially do they differ in the peculiarity that the Pied Rock-Thrush has a very marked and conspicuous summer nuptial plumage which is obtained by a direct spring moult of the small feathers, whilst the White-throated Ground-Thrush follows the general rule of the *Turdidæ* and has but the usual autumnal moult.

As quoted above, Jerdon refers to the Pittas as Ground-Thrushes; and he places the Pittas in somewhat close proximity to the true Thrushes. In my birdroom it is a common thing to see a Pitta * and one of these White-throated Ground-Thrushes

* *Pitta brachyura*:—*Avic. Mag.* VIII., p. 179.

sitting on the same perch and within a foot or so of one another. In a dark corner, at a casual glance, they might even be mistaken for one another. But the similarity, such as it is, will not bear inspection: The birds of both species favour low perches and shady nooks, and are consequently not infrequently brought together; but they do not really associate—there is no true affinity between them. In addition to structural differences, no better proof that they are diverse need be advanced than the circumstance that they can sit and live together, and frequent the same haunts week after week and month after month, and yet remain in perfect peace from sheer indifference to one another's presence. Two Pittas or two Thrushes, if well established and healthy, would go for one another at sight.

It was on the 8th October, 1902, that I obtained my two males, the only examples of the genus I have ever kept. I need not describe the plumage of the male: Mr. Grönvold has depicted the bird, including the face markings, with the greatest care and accuracy, that is, as they were nearly eighteen months ago, in October, 1902, when he painted "Tim" the second bird, the finest "Tom" being loose in the aviary, the general deportment and carriage however being taken from the latter. Some trifling changes in the shades of the colours have since taken place; and last autumn, after they had fully completed their moult, the brightness and brilliancy of the colouring, especially of the garden bird, its glossiness and exceeding purity of tint were beyond the power of human art and hand to reproduce. The upper parts of the body were then a most brilliant shining slate-blue, the under the most brilliant orange-chestnut, and all so exceedingly clear and pure; the forehead crown and nape are of a darker shade, to aid the bird in escaping detection. At that time, at any rate, the colours of the male as given in all the books to which I have access were by comparison nowhere! But such delicacy of tint does not last very long in a smoky London atmosphere. I have to speak of it as a dream of the past.

As might be supposed, Tim in the birdroom commenced and got through his moult fully a fortnight earlier than the one in the garden, but the ultimate result was in favour of the latter.

The female I have never seen. The Catalogue says:—“The female appears to differ from the male in having the upper back, scapulars, outer webs of secondaries, greater and lesser wing-coverts, and innermost secondaries suffused with olive-green.” And Jerdon:—“The female differs from the male only in the colours being less pure.” The following extract from Mr. Seeböhm’s “Thrushes” has been kindly forwarded to me:—“The female is less bright in colour, the upper parts having a greenish-brown shade, with yellow edges to the feathers, while the wings are shaded with green.”

Young in first plumage appear to be unknown.

Jerdon informs us:—“The White-winged (as he calls this species) Ground-Thrush is peculiar to the jungles of Southern India, extending as far as Goomsoor on the east coast, and to Bombay on the west side of India. It is most abundant in the forests of Malabar and Wynaad, but is not rare in the jungles of the Eastern Ghâts. It prefers bamboo-jungles, feeds on the ground, and generally perches low. Its food is chiefly insects, such as ants, cockroaches, and beetles; but, not unfrequently, also stony fruit. It has rather a sweet song, not often heard, however. Mr. Ward procured the nest in N. Canara, made of roots and grass, placed at no great height from the ground; and the eggs, three in number, were pale bluish, speckled with brown.”

The following extract (as above) from Seeböhm’s “Thrushes” is important:—“The White-throated Ground-Thrush is very distinct from all its allies, and it is difficult to say to which of them it is most nearly related. It has the head and neck of *G. peroni* * joined to the body of *G. citrina* †, but there can be little doubt that its affinities are much more with the latter than with the former species.”

When first received, and for some time afterwards, my two

* The Timor Ground-Thrush, supposed to be confined to the island of Timor.—R. P.

† The Orange-headed Ground-Thrush, which breeds in the Himalayas from Nepal to Assam, and migrates in the cold season to Central and Southern India and Ceylon. It seems to be a much more common and better known species than the White-throated Ground-Thrush.—R. P.

birds were very timid. They were not afraid of me but of one another and of the other birds: of me and my bird-woman they took no notice. When loosed into the birdroom and aviary I would find them crouching, always on the ground, in all kinds of holes and corners, trusting to their protective colouring for concealment—crouching low, parallel with the ground, hiding the more brilliant underparts. When on the wing, they would fly rapidly for a short distance and then drop quickly and suddenly into the covert. But this timidity passed away; and for a long time they have been going their own ways, neither interfering with other birds nor being interfered with by them—but there are no other true Thrushes in the place.

In their general habits, they are very like our Song Thrush with a touch of the Blackbird, but in many ways still more like our Redbreast. Some of the ordinary call-notes have distinct affinity with those of the Song Thrush. Although a great deal on the ground and in low bushes, they are often on the higher perches. They prefer to roost on thin natural twigs, sometimes about 3ft.—4ft. from the ground, very often on the highest available spot. Like Robins, each has his particular sphere of influence. Tim reigns in the birdroom, rarely venturing more than a yard or so into the garden. Tom reigns in the garden, and woe did betide poor Tim if, tempted out on a bright summer day, he ventured too far—Tom was after him in a moment. During cold weather, when I endeavoured to drive Tom into the birdroom for the night, he sometimes would not be driven in, and I often had to net and carry him in. When driven in, I used to find Tim just inside, with head down bristling feathers and arched back, like the weaker dog trying to intimidate the stronger, and Tom tight and with head high in air and bill pointing to the ceiling, sometimes with quivering wing, ready to give chase the moment Tim might take to flight.

My reason for referring to this state of affairs in the past tense is not because the two birds are dead or have ceased to be in my possession; it is because during the last two months or so a slight change seems to have come over them. Tim, the house bird, has been more assertive. If not too cold, he spends much

of his time on a perch about four feet from the birdroom window, while Tom sits on a perch nearly six feet from the ground at the extreme end of the near aviary, a projecting corner of the house preventing the two rivals from seeing one another. Thus, hour after hour, and day after day, they sing at one another. The singing is sweet ; but I doubt if the thoughts they express would look very sweet if committed to paper. One day in January, I was standing in the garden close to Tom, watching his chestnut vest and white extended throat as he sang, sang, and sang again. My presence possibly encouraged him, or he wanted to show off, or perhaps to let me know how brave he was, and I fear he must have hurled at Tim some very naughty words, provoking him beyond endurance, for the latter suddenly wheeled round the corner and dashing straight at Tom knocked him headlong to the ground, hastily retiring with a very respectable pinch of his breast feathers in his bill. Tom, with the greatest composure, and without betraying the slightest sign of anger or annoyance, philosophically picked himself up, slowly and with a dignified air hopped step by step up to his accustomed perch, and then uttered words which may be more readily imagined than described. Towards the end of February I could not help noticing that there were several white patches on Tom's breast, where presumably Tim had been sampling the feathers. *

Nevertheless, being afraid of one another, there is no actual fighting, but there is always danger in leaving such birds together ; and often, when the weather looks particularly threatening and tempestuous, I lay a sudden hand on Tim and shut him up until the morning, an act which both birds seem highly to appreciate. Those who can do so should keep such birds apart, even separating the sexes during the non-nesting period. I was told that last summer a male Orange-headed Ground-Thrush at the Zoological Gardens, on being loosed into the same aviary with a female, killed her before they could be separated.

* The garden bird has ceased to see the fun of this little game, and now spends much of his time just outside the birdroom window, singing away and daring Tim to come out. The latter slinks about in the dimmest and most distant recesses of the room, not venturing so much as to wag his tongue so long as Tom is on the watch.
—R. P., March 19.

The song of my two Ground-Thrushes is a very great attraction. Although rarely singing at night like the charming Blue Rock-Thrush (*Avic. Mag*, III., p. 103), they sing from early dawn until nearly dark for fully nine months out of the twelve. Jerdon, quoted above, says that the song is not often heard. Perhaps, in the lonely jungle, the song may be there but not the human ear to listen to it. A great deal of the sweetest song is uttered in a low tone as the bird is hidden away in some dark quiet corner, and cannot be heard at any distance. Many of the notes, however, are loud and full, but these are the least musical and are uttered from the higher perches, and are probably notes of defiance. Although the less musical—probably owing to my birds being hand-reared specimens—their clear ringing voices have been cheering our hearts all through this dull cheerless winter, are falling on my ears now as I write, and have this winter compelled the most captious of my neighbours, however unwillingly, to admire the glorious singing of the birds. Possibly this constant singing may be due to the circumstance that there are just the two males who pass the time in railing at one another. Repeatedly I have heard the one utter a series of notes—a kind of “O you great big doited old fool”—which has been echoed back, note for note, by the other, with precisely the same intonation, and this has been repeated some half-dozen times by each bird. During August they slow down; and, although they do not sing fully out again until December, before the moult is over they commence recording and warbling in low gentle tones. It is pleasing beyond expression in words, when one is busy in the garden or attending to the food in the birdroom, to find one of these handsome fellows close by, absolutely fearless as regards your presence, pouring out his little heart in sweetest melody.

I have not myself noticed any inclination on the part of these Thrushes to imitate the notes of other birds; my bird-woman, however, who is more with them than I am, declared before Christmas that they had learnt several new songs. The song is certainly very varied.

As a rule, when singing, they hold up their heads in an ordinary position, displaying the white throat from which the

species takes its distinctive name. But on a few occasions this winter I have found one or other in a totally different posture, perhaps a courting posture. On one of these occasions Tom was within a foot of me, and I noted him carefully. He was standing very tight and upright, the wing-butts hunched and a little forward and clear of the body, the primaries pointing straight downwards with the points touching the toes, and the head drawn up but with the bill, close against the chest, pointing like the wings straight down; and in this quaint but very strained position he was warbling forth the sweetest of sweet notes.

Although not delicate for foreign birds, they do not like severe weather. On the other hand, they are very fond of fresh air and cold water.

The male White-throated Ground-Thrush is a tame handsome bird with a pleasing and almost ceaseless song, lives on the simplest insectivorous food with an occasional visit to the fruit saucer, and is absolutely happy and contented in confinement; and I have never regretted the day on which I added Tom and Tim to my collection. It is from necessity, not from choice, that they remain old bachelors—a lady White-throat has not yet come my way.

THE GREAT BUSTARD.

By W. H. ST. QUINTIN, F.Z.S., M.B.O.U.

I have more than once referred to my Bustards in the Magazine, and I have always hoped that one day I might have proclaimed that I had been successful in getting this fine bird to rear young. But alas! I have within the last few weeks had the great misfortune to lose by an accident my old male, which I had kept here for nearly thirteen years; and as it will probably be very long before I can replace him, I may as well tell how I was very near succeeding some three years ago. As far as I can learn, though Bustards have of course been often kept in captivity in England, young have not been hatched from eggs laid in confinement in this country. Early in the last century,

after the bird became scarce, but before it became quite extinct as a British resident, it was not uncommon for eggs to be brought in from the fields, and set under hens, and apparently sometimes the young were successfully reared. I have somewhere, at this moment mislaid, an extract from a book in the library of the Linnæan Society, which states that two young Great Bustards were reared in Bavaria, the produce of a pair of tame birds. But one statement therein made seems to me difficult to understand—that the parents were birds in their *second year*. My experience is that the young male does not get his spring plumage, pectoral bands, and whiskers, till his third summer; and till that time does not expand his pouch.

However that may be, a young Bustard was hatched here in the summer of 1901, as I will now describe. At the time I had two females, one four years old, the other about six; and two males four and twelve years respectively. Both females laid eggs, one on May 14th, the other five days later. One egg only was laid in each case. The younger bird never attempted to incubate; the other commenced to sit at once, and was never seen off, except when she came to feed.

Later on, I put the neglected egg into an incubator, but it did not hatch. When I left for Norway on June 11th the older Bustard was sitting steadily. Neither of the males was allowed near the nest. The sitting hen used to make gruff "barks" at them, if they came too near, as she sat hidden in the thick grass: sometimes rushing out and hustling them off. We noticed that though the two males were tolerably good friends, the young bird did not venture to display this year, the old fellow driving him off if he began to set up his feathers. I can not do better than quote from a letter sent out to Norway by my falconer, Arthur Moody, who was left in charge of the birds.

"June 16th, 1901: The sitting hen Great Bustard has hatched off, but I am sorry to say that the young one is dead. She was due to hatch to-day, but I thought I had better keep an eye on her a day or two before, so on Thursday and Friday (13th and 14th), I just went near enough to the nest to see her sitting; and of course thought she was going on well, as I could

see no difference in her behaviour. However, I took the precaution on Friday evening of putting a board near the nest with a little meal, some ants' eggs, and mealworms upon it. I was going to do the same on Saturday morning when the old bird came rushing from a different place, and on going there I found the young bird very weak, and almost unable to stand, with its eyes shut, and looking very bad. By its emaciated appearance I should say it had been hatched two or three days, and was suffering from want of food. I put all kinds of things round it, and climbed into the beech tree to see if the old one would feed it. But she did not, though I watched her some time. She picked a little of the flowering grass and dropped it near the young bird, but it was too far gone to eat. I thought the best thing was to cram it with chopped mealworms, which I did several times, and to leave the old one to brood it until evening. But it died about five p.m. I have put it into spirits."

When the young one was closely examined the skin of a beetle larva (not a mealworm), that had been picked off the ground, was sticking to its bill. It was unfortunate that at this time there was a very unpleasant spell of weather, cold wind, and showers of rain and hail. Possibly if it had been more genial at this critical time, the little Bustard might have been reared. In the autumn of this same year I lost this female from a chill taken in a heavy storm of wind and wet snow in November. This has up to now quite defeated my further efforts to breed the Great Bustard. My remaining hen bird, though nesting each year, has never hatched. And now for the saddest part of my story! My splendid old cock bird, which I had kept here since the summer of 1891, a two-year-old bird then as I thought when I received him, was startled a few weeks ago by a gardener, whom he did not know, coming suddenly upon him. The bird made a jump and fell on his side breaking his wing close up to the body, and apparently a large artery was ruptured by the splintered bone, for he was found a short time afterwards smothered in blood. Though a grand bird to look at, and in perfect condition, he only weighed twenty pounds. A fine old wild male will weigh thirty pounds or even something more; but probably the young birds captured and reared by hand, do



1.



2.



3.



HYBRID DOVES Plate 1.

not get a sufficient supply of the right sort of food, and do not reach the size of the wild-bred bird.

I am now anxiously looking out for another male Bustard, but I fear it may be difficult to replace my old favourite.

ON SOME TURTLE DOVE HYBRIDS AND THEIR FERTILITY.

By T. H. NEWMAN, F.Z.S.

The subject of hybrid birds is one which has from very early times received a good deal of attention from aviculturists; and till quite recently it was almost universally believed that all hybrids, with the exception perhaps of certain crosses among the game birds and ducks, were "mules," that is, were incapable of reproduction. But it has now been proved that numerous hybrids in many different orders are quite fertile. Very much, however, yet remains to be found out, and a wide field lies open to any one who will explore its unknown mysteries. In the meantime, it may be considered of sufficient interest to place on record a few results, obtained from certain Turtle dove hybrids, from the beginning of 1901 to the present time.

The genus *Turtur* is a large one, containing some thirty species, and has been divided by Count Salvadori, in his Catalogue, into five subgenera, all of which, nevertheless, appear to be very closely allied. The sub-divisions have been made chiefly from the arrangement or form of the neck feathers; this being the special badge of the Turtle doves. I mention these divisions, as four out of the five subgenera are included among my hybrids.

In March, 1901, I procured a fine male of the, by no means rare, cross between a male wild English Turtle dove* (*Turtur turtur*) and a female domestic Barbary Turtle dove (*T. risorius*). A very brief description of this bird will suffice, as this hybrid is well known. In shape and general appearance it approached its wild parent: the scapulars showing decided

* The nomenclature used is that of the *Cat. Birds Brit. Mus.* Vol. XXI.

traces of the cinnamon brown border with central portion darker, the outer web of the outer tail feathers was conspicuously white, the white tips of the outer tail feathers were also sharply defined from the black portion, as in *T. turtur*. On each side of the neck was a patch of black and white feathers, but not so scale-like in appearance as in that species. Two more specimens of the same cross, in nearly adult plumage, seem to differ in several points from the original bird. They were thought by their breeder to be hens, but I am not yet sure of the sex, as I have only had them a short time. In size and shape they are more like Barbary doves, and are larger than my former bird. The scapulars, if anything, show stronger traces of the cinnamon; the neck patches are scale-like, and very similar to those of the wild Turtle; the white border is present at the sides of the tail, but the white tips are not so sharply defined. But to return to the first bird: he was mated in the beginning of June, 1901, to a hen, which was supposed to be a hybrid between a male Barbary and a female Necklaced Turtle dove (*T. tigrinus*); but as she in no respect, as far as I can see, differs from an ordinary Barbary dove, I am compelled to say in her case—not proven.

The history of this bird seems to have been as follows: A pair of Barbary doves were kept with two hen Necklaced doves, no other doves being with them. The cock Barbary was noticed to be on friendly terms with one of the Necklaced hens, and accordingly the hen Barbary was removed. The Barbary cock and hen Necklaced nested, with the result that this bird, the very naturally supposed hybrid, was reared. The hen Barbary was not again introduced till a day or two before the young bird was hatched. The hen Necklaced dove afterwards came into my possession. Four days after, she mated with another Barbary cock which I had only bought the day before. This, I think, showed that she had been used to the company of a Barbary dove. She laid one egg which was unfortunately unfertile; then several imperfect eggs followed, and she died when I had only had her two months. Thus I was unable to clear up the mystery which hung round her supposed daughter. Certainly all the eggs which this supposed hybrid lays are



6.



Bale, Sons and Danielson, Ltd.

5



HYBRID DOVES. Plate 2

4.



smaller than the majority of Barbary eggs; in fact they are not much larger than the egg laid by the Necklace hen. But one can hardly establish a relationship on this ground, and in hybrid breeding one must be absolutely sure of one's facts.

The result of the Union, between the first-mentioned bird (the Turtle \times Barbary hybrid) and the supposed hybrid, was five young from three nests, all of which were reared, though three of them did not reach maturity. These young all approached the Barbary dove in colour, though some were of a darker shade than others. The two that lived are a cock and hen; the cock in shape favours the Barbary. At a little distance he appears of the usual plain fawn colour, but, when closely examined, the feathers of the scapular and interscapular region are found to be bordered at their tips with a lighter shade of fawn, the centre portion being of a slightly greyer shade. Thus the strong developed "lacing" of the wild Turtle dove has been transmitted to the $\frac{1}{4}$ -bred offspring. But the most noticeable feature lies in the black ring on the neck, which, instead of being a plain broad black collar, has more the appearance of an irregular black patch on each side of the neck, almost separated at the back where the black feathers are tipped with pale buff. His notes hardly differ from those of the pure Barbary.

In 1902 this bird paired with his mother. The first two nests did not produce any result, probably owing to the male bird not being fully developed, as he was rather delicate when young. However in the third nest two young were hatched and reared, which were practically pure Barbary doves in appearance. I believe they were both hens.

The hen ($\frac{1}{4}$ Turtle \times $\frac{3}{4}$ Barbary) differs from her brother in several points. She is a good deal smaller, and I think distinctly resembles the wild Turtle dove in shape, but is more Barbary like in colour. The scapulars and smaller wing-coverts are more uniform, but are narrowly tipped with buff, which gives the bird a slightly "mealy" look; the black collar is more regular, but, even in her, some of the feathers at the back are narrowly edged with buffish white. Her notes approach those of

the domestic bird, but she speaks the Barbary tongue, if I may so express it, with a slightly foreign accent: for example, the laughing note, instead of being a clear ringing He-he-he-he-he, is usually run together like He-e-e-e-e. She has never been mated.

In 1902, the Turtle \times Barbary hybrid cock paired with a white Barbary hen. One young one was hatched, almost on the same day unfortunately the hybrid parent escaped, which following the final example of its prototype of the Ark, "returned not again any more." The hen notwithstanding managed to rear the young one, but it was weakly and did not live for more than six weeks; for which I was sorry; because this bird, in spite of being bred from a white hen and only being $\frac{1}{4}$ *T. turtur* to $\frac{3}{4}$ of *T. risorius*, was very dark in colour, being very little, if any, lighter than its father, and very much darker than any of the five young which were bred from the same hybrid parent when mated to a normal coloured Barbary hen the summer before; which fact is not a little curious. Can it be that the absence of pigment in the white female parent gave a better opportunity for that of the male to be transmitted?

Another hybrid with which I have been very successful is that between the Necklaced dove (*T. tigrinus*) and the Barbary. It is hardly to be wondered at that this cross should be a handsome one, considering what a beautiful species *T. tigrinus* is. But this species seems to be subject to a good deal of individual variation, both in size and in the intensity of its markings. The largest birds are said to come from Java, Timor, etc. As far as my limited experience goes, the larger specimens seem less distinctly marked on the wings than the smaller. The bird at present exhibited at the Natural History Museum, from Tenasserim, is very large, larger than any I have ever seen alive, with the dark shaft stripes on the upper parts poorly developed, but it does not appear to be immature as it has a large neck patch forming quite a cape round the nape and sides of the neck. In its large size and comparatively plain wing-coverts, this specimen would seem to approach *T. chinensis*, a species however with which I am not acquainted. An imported hen, that came into my possession, though large, was decidedly smaller than the

Museum bird and had the wing-coverts more plainly striped. And lastly a pair I had, which were bred in England, were again smaller, but brighter in their colours with the shaft stripes on the wings broader and more distinct (though these are features which I believe increase with age), the tail also seems longer in proportion, and the whole bird is more graceful. It is from the cock of this last pair that my hybrids were bred.

The first two, hatched in 1902, were produced under rather curious circumstances. I have mentioned above that during this year I had a Barbary hen mated to her hybrid ($\frac{1}{4}$ Turtle \times $\frac{3}{4}$ Barbary) son. He was not a very demonstrative mate; and, after they had reared their first two young ones, I was surprised to find that the next nest they had contained two very dark young ones, which I at first could not make out. In the same compartment was a cock Necklaced dove, which had lately lost his mate, and which I had frequently noticed was on friendly relations with the Barbary hen. It soon turned out that these two young were undoubtedly Necklaced \times Barbary hybrids. The necklaced cock was mated to this Barbary throughout last season; with the result that seven more young ones have been reared from them, all resembling these first two.

The Necklaced \times Barbary hybrid is a decidedly attractive bird, taking chiefly after the male parent, and may be briefly described as follows:—Mantle with the scapular region a rich brown, the latter with narrow dark grey median stripes expanding slightly towards the tips of the feathers; the outermost wing-coverts ashy grey, almost concealed when the wing is closed; quills very dark brown approaching black, and longer in proportion than in the pure Necklaced Dove; tail, long, the three outer feathers on each side graduated and tipped with greyish white; head, with the throat and breast grey with a strong vinous tinge; on each side of the neck, narrowly joined at the back, a large patch of black feathers edged with white somewhat after the manner of the English Turtle dove. These feathers can hardly be said to be bifurcated, as in *T. tigrinus*, but most of them seem to have a break in the centre; in fact they may be said to be intermediate between the corresponding feathers of the two parent species. Another point in which it rather

resembles the Common Turtle is the voice. The note used, when calling its mate to the nest, reminding one of *T. turtur* only harsher; at other times, when sitting quietly on a perch, the coo is very like that of the Necklaced dove. It sometimes uses also a short grating note which corresponds to the laughing note of the Barbary.

In June 1903, a cock Necklaced \times Barbary hybrid, hatched in the beginning of the previous September, mated with a white Barbary hen. The first nest contained unfertile eggs, but these were laid in less than a week after pairing. Four more nests produced six young, all of which have been reared and seem strong. This speaks well for the care bestowed on them by their mother; for the cock, after assisting very fairly with the first pair of young, has since taken very little share in either sitting or feeding; in fact, when the hen was thus engaged, he did his best to persuade her to desert and lay again. I never saw him on the eggs once, nor take any notice of the young during the rearing of the second pair.

These six ($\frac{1}{4}$ Necklaced \times $\frac{3}{4}$ Barbary) doves show a good deal of variation in colour. One, a hen, is very nearly as light as a pure-bred Barbary, but the black collar is not so sharply defined and is very narrow at the back: also, when examined closely, the scapular feathers are seen to have a faint stripe down their centres. The other five are considerably darker, some being nearly as dark as the $\frac{1}{2}$ -bred birds between *T. tigrinus* and *T. risorius*. Their notes, however, are more Barbary like: but they certainly favour the Necklaced dove more than the $\frac{1}{4}$ Turtle \times $\frac{3}{4}$ Barbary does the Common Turtle. I have but little doubt that these will breed, if suitably mated this coming season.

The prettiest Turtle dove hybrid however, that I have seen, I think, is that between the Necklaced dove (*T. tigrinus*) and the Senegal Turtle dove *T. senegalensis*), of which I was fortunate enough to become possessed of a fine pair during the autumn of 1902. In some respects this hybrid seems to combine the best points of both parents, though I do not think that on the whole it equals the pure bred *T. tigrinus*, which has so many charms of its own, that it can scarcely be improved. The chief

beauty of the hybrid lies in the extraordinary size of the neck patches, the backwardly-placed collar of the Necklaced dove having to a certain extent combined with the forwardly-placed neck patches of the Senegal dove, so as to form a beautiful wide collar, extending fully $\frac{3}{4}$ of the way round the neck, only being broken in front by the rich vinous of the throat and breast. This collar is composed of strongly bifid feathers; which is only to be expected, as this feature is possessed by both parents. These feathers are black with rusty vinous tips. The head is grey with a strong vinous wash; the scapulars and smaller wing-coverts show distinct rusty edgings, the stripes of *tigrinus* have nearly disappeared, only being represented by the darker colour of the actual shafts of some of the feathers, being most pronounced in the tertials. The whole wing when spread out is very pretty; the warm rusty-tinted portion nearest the body being separated from the almost black primaries by the grey outer wing-coverts which are delicately edged with ash colour, forming a grey patch in the centre of the extended wing. Their notes very much resemble those of the Necklaced \times Barbary hybrid.

I allowed the Necklaced \times Senegal hybrids to mate together in June, 1903, as I believe that young, bred from hybrid parents, both of the same cross, are wanted, as shedding light on the subject of the origin of species. But though seven or eight eggs were laid, most of them were soon broken, and the birds did not seem inclined to sit on those that were left. Two eggs, which I managed to get incubated by other pairs were not fertile; but this certainly does not prove that this pair could not have bred.

In the above account I wish to emphasize that not only did three distinct hybrids breed, but that they were all extremely fertile, as the following table shows:—

Parents	No. of eggs laid.	No. of young hatched.
δ <i>T. turtur</i> \times <i>T. risorius</i> with ♀ <i>T. risorius</i>	.. 6	.. 5
δ $\frac{1}{2}$ <i>T. turtur</i> \times $\frac{3}{4}$ <i>T. risorius</i> with ♀ <i>T. risorius</i>	.. 6	.. 2*
δ <i>T. tigrinus</i> \times <i>T. risorius</i> with ♀ <i>T. risorius</i> (var. alba.)	} 10	{ 6, and 1 fertile egg unhatched

* In this case the immaturity of the male, as has already been shown, was the probable cause of no young being produced in first two nests.

It will be noticed that all the hybrids that bred were males, though the only female tried (the Necklaced \times Senegal) laid freely : also I believe the female Turtle \times Barbary has produced eggs.

With regard to the utility of Columbian hybrids, it would seem doubtful whether the hybrids, recently bred by Mr. P. St. M. Podmore,* originally between a cock domestic Pigeon and a hen Wood-pigeon (*Columba palumbus*), and subsequently from a hybrid cock (Domestic Pigeon \times Wood-pigeon) mated to a domestic hen Pigeon will eventually prove of more practical value than the above Turtle dove hybrids. It is interesting to note that almost precisely similar results should have been obtained in two distinct families of the same order almost at the same time.

EXPLANATION OF PLATES.

- Plate I. fig. 1. $\frac{1}{4}$ Common Turtle \times $\frac{3}{4}$ Barbary hybrid ♂ .
 „ „ 2. $\frac{1}{8}$ „ „ \times $\frac{7}{8}$ „ „ ♀ .
 (Bred from fig. 1).
 „ „ 3. Necklaced \times Senegal hybrid ♀ .
- Plate II. fig. 4. Necklaced \times Barbary hybrid ♂ .
 „ „ 5. $\frac{1}{4}$ „ \times „ hybrids, juv.
 (Bred from fig. 4).
 „ „ 6. Necklaced \times Barbary hybrid.
 (Same as fig. 4 but in nest plumage).

NOTES ON PARRAKEETS.

By JOHN SERGEANT.

Referring to the Hon. Canon Dutton's remarks in the February issue in his letter on the above subject, anent the susceptibility of the King Parrakeet to cold. My experience bears out Mr. Dutton's in regard to the hardiness of this lovely bird.

I had a pair, King and Queen, for nearly three years in an outdoor aviary, which was occupied by various species of the beautiful Broad-tail family. On frosty mornings when I had

* cf. *Zoologist*, 1903, p. 401.

broken the ice in their drinking fountain, which was a zinc dish 18 inches square, let into the ground, level with the surrounding grass, the King and Queen used to be first down to the water, as they were easily masters of all the other inmates of the aviary, and, plunging into the dish, would send the water flying in all directions, and afterwards would hang out to dry on a branch in the most open part of the aviary, frequently in the teeth of a keen North-Easter.

During the time I had them they were never ill a day, and they have left a lasting impression in my mind of their beauty and intelligence which makes me long for the time when I can find suitable accommodation for another pair.

As Canon Dutton says, the endurance of cold by Parrots is an interesting subject, and I am inclined to think that he is right when he remarks that it seems to be settled more by species than by habitat. For instance, I have kept nearly all the Broad-tails and they have all been entirely regardless of cold. One pair of Pennants I had, purchased as very young birds in a terrible dirty and featherless condition, I turned out in June, and they came into brilliant plumage the following autumn, and as winter approached I was anxious to get them out of a habit they had formed of sleeping in a Thorn tree in the open aviary, and induce them to follow their companions into the inner aviary at night. But although every night for weeks, as dusk approached, I drove them in, immediately my back was turned they were out and on their old perch again, and nothing short of closing the door, which for many reasons I was reluctant to do, would persuade them to stay in; and all through that winter and three following ones I frequently found them in a morning with their backs flecked with snow or sleet that had fallen during the night. I had that pair for four years and they were always the picture of health.

Red Rosellas, Mealy Rosellas, Crimson Wings, and Barnards I have found equally hardy; all took their bath summer and winter alike with no sign of either distress or even discomfort, however severe the weather was. The winter of '95 and '96 was as bad as any we have had for many years, and this is included in the period of which I am writing.

Conures I have also found indifferent to cold, although not so fond of bathing as the *Platyercis*; and a pair of Blue Bonnets proved as hardy as any of them.

But Turquoisines and Elegants, although I believe coming from the more northerly portions of the Australian Continent,* cannot endure exposure to severe weather, and ought to be taken indoors as winter approaches. I once lost three Turquoisines in one night through sudden cold. I remember we had a very warm late summer and I had been lulling myself into the belief that the weather would continue warm and open and that winter was far off, when suddenly, one night late in October, there came an alarming drop of many degrees in the temperature, and when I went down to my aviary in the morning, after having spent a wretched night fearing the worst, I missed the shrill whistle with which one of the cocks always greeted my appearance, and not being able to see more than three Turquoisines I searched among the bushes and found two cocks and a hen lying on the ground, killed by the cold. I immediately caught up the others and the Elegants, and never after did I leave them out of doors later than September.

How is it that there are no Turquoisines or Elegants to be obtained now? They are among the most desirable of all Parrakeets from an avicultural point of view, and if taken indoors in September, even if placed in a room, the temperature of which is kept just above freezing point, and turned out again late in May, they will give no trouble whatever, and if an aviary is devoted entirely to the species they will breed as easily as either Cockatiels or Rosellas. They are very impatient of the presence of other birds in their vicinity, and unless the aviary is very large, no young need be looked for unless an aviary is entirely devoted to them.

I was never successful in getting my Blue Bonnets to nest, and should like to know whether they have ever bred in this country. They are charming little birds, and seem to be as scarce as either Turquoisines or Elegants now.

The Blue Mountain Lories have also proved quite hardy

* Probably for that very reason, the northerly portion being the hottest.—A. G. B.

with me, although I must admit I have not had a pair longer than two years, when one of them died in a fit one very hot day in July. I found a clot of blood on the brain and the body simply a ball of fat.

These birds while I had them were fed on the ordinary seed diet with two or three times a week a tablespoonful of honey and some sponge cake.

They were the tamest Parrakeets I ever had, and would fly on to my shoulder or hand immediately I entered the aviary. The cock would roll over on his back in my hand and play with the fingers of the other hand in the same manner that a puppy will do, pretending to bite and pushing my fingers with his feet. They were both as playful as kittens.

I have thought since, after reading the experiences of some of our members with these birds, that had I given them less seed and a more suitable diet, considering that they are brush-tongued and pollen eaters, I should never have lost the cock, and thus, through being at that time unable to get another, I was persuaded to part with the hen to a friend who had a bird he wished a mate for. She died a year after.

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

Those of our members who have not been to the Gardens for some time will be surprised and gratified, on their next visit, to find how many and great are the improvements that have been carried out. Since the appointment of the present Secretary, less than a year ago, numbers of lasting improvements have been made in almost every direction.

We can only, in this journal, enumerate a few of the alterations in the various aviaries, etc.

The Western aviary, which was in a very dilapidated state, has been practically rebuilt, and is now completely furnished and beautifully fitted up and stocked. The larger and less attractive Doves and Pigeons have mostly been moved to the new Pheasantry near the South Entrance. Here the experiment

is being tried of keeping a pair or so of Doves with each pair of Pheasants. This fine range of Pheasantries is entirely new, although it is on the site of the old one, and is very well equipped for its purpose. Many of our readers have looked with disgust on the wretched way in which the smaller Finches were treated in the past, a number of exceedingly small box-cages in the Parrot House being the only accommodation provided for them. This has all been altered now, and all these little birds have been transferred to the aviaries at the back of the Insect House, where some of them have actually commenced to build nests. Other improvements have been made in the arrangements of the birds in the Parrot House. The Toucans have been transferred to the Western Aviary, and their large cages are now occupied by the smaller Parrakeets and Lorikeets. The large new aviary on the north bank of the Canal is tenanted by a number of Crows, Gulls, Herons, etc., and it is intended later to transfer some of the hardier Parrots thither also.

Mr. Bertling, who has for some years been engaged in the Superintendent's office in the Gardens, has been appointed Head Keeper, and the Secretary informs us that he has given him special charge of the Birds. This is an exceedingly satisfactory arrangement, as Mr. Bertling is an enthusiastic and experienced aviculturist, and a member of the Avicultural Society.

The following is a list of the additions to the collection for the month of February 1904 :

FEB.	2.	1	Ring-necked Parrakeet (<i>Palæornis torquata</i>) ♂ ..	India.
"	2.	5	Hybrid Silver Pheasants (<i>Euplocamus nycthemerus</i> × <i>Phasianus colchicus</i>) ♂	
"	3.	1	Levaillant's Amazon (<i>Chrysotis levaillanti</i>) ..	Mexico.
"	3.	1	Malabar Parrakeet (<i>Palæornis peristerodes</i>) ..	S. India.
"	3.	1	Philippine Racket-tailed Parrot (<i>Prioniturus discurus</i>)*	Philippine Islands.
"	3.	1	Everett's Thick-billed Parrakeet (<i>Tanygnathus everetti</i>) ♀	" "
"	3.	2	Red Lories (<i>Eos rubra</i>) ..	Moluccas.
"	3.	2	Blue-streaked Lories (<i>Eos reticulata</i>) ..	Timor Laut.
"	3.	1	Tabuan Parrakeet (<i>Pyrrhulopsis tabuensis</i>) ..	Fiji Islands.

* This bird is entered in the official list as *Prioniturus platurus* from Celebes, but I pointed out to the Secretary that it was the Philippine *P. discurus*, and in a letter dated Feb. 22, he writes "I am satisfied that you are right about the Racket-tailed Parrot, and I have changed the name." This species is easily distinguished by its bright blue crown.—D. S.-S.

FEB.	3.	2	Wonga-Wonga Pigeons (<i>Leucosarcia picata</i>)	New South Wales.
"	9.	1	Great-billed Weaver-bird (<i>Ploceus megarhynchus</i>)	Naini Tal.
"	9.	2	Hybrid Finches (<i>Spermestes cucullata</i> × <i>Munia striata</i>)	.. (Europe).
"	10.	2	Yellow-winged Parrakeets (<i>Brologerys virescens</i>)	Brazil.
"	10.	1	Senegal Parrot (<i>Pæocephalus senegalus</i>)	.. W. Africa.
"	10.	2	Golden Eagles (<i>Aquila chrysaëtus</i>)	.. Scotland.
"	11.	1	Angolian Vulture (<i>Gypohierax angolensis</i>)	.. Congo.
"	13.	2	Hybrid Chilian Pintail (bred between <i>Dafila spinicauda</i> and <i>Mareca sibilatrix</i>) ♂, ♀	.. (Europe).
"	15.	1	Undulated Grass Parrakeet (<i>Melopsittacus undulatus</i>)	Australia.
"	16.	1	Bullfinch (<i>Pyrrhula europæa</i>) ♂	.. British Isles.
"	17.	2	Ring-necked Pheasants (<i>Phasianus torquatus</i>) ♂, ♀	China.
"	18.	1	Citron-crested Cockatoo (<i>Cacatua citrinocristata</i>)	Sumba Island.
"	22.	1	Greater Sulphur-crested Cockatoo (<i>Cacatua galerita</i>)	Australia.
"	24.	1	Ring-necked Parrakeet (<i>Palæornis torquata</i>)	.. India.
"	26.	1	Rose-crested Cockatoo (<i>Cacatua moluccensis</i>)	.. Moluccas.
"	26.	1	Sonnerat's Jungle-fowl (<i>Gallus sonnerati</i>) ♂	.. S. India.
"	26.	1	Golden-bellied Grosbeak (<i>Pheucticus auranteiventris</i>)	Argentina.
"	29.	3	Gold Pheasants (<i>Thaumalea picta</i>) 3 ♂	.. (China).

The Philippine Racket-tailed Parrot and Everett's Parrot are probably new to European aviculture. They came from our esteemed member Mrs. Johnstone, and have been referred to already in this magazine (*cf.* New Series, Vol. I., p. 408, and Vol. II., p. 69). The Golden-bellied Grosbeak is also new to the Zoological Society's Collection.—D. S.-S.

CORRESPONDENCE, NOTES, ETC.

ASPECT FOR AN OUTDOOR AVIARY.

SIR,—As we all know, it is one of the first maxims of outdoor aviculture that it is useless expecting success unless the aspect of the aviary is South or South S.E., but what can be said of a Corporate body who, after seeking advice North, South, East and West, spends a considerable sum of money on an otherwise fairly well-planned and praiseworthy erection and places it in a position *facing almost due North*. I am referring to the Corporation of this town, Southport.

When I first heard of the intention of the Corporation to erect an aviary, I was pleased beyond measure, and applauded the leading spirits on the Parks Committee who had originated the idea, and was about to offer my services to them in either an advisory or any other capacity, having had many years' experience in this locality with over fifty kinds of British and

oreign birds in outdoor aviaries, many of which, as our members know, I have succeeded in breeding here. But learning that it was the intention of the sub-committee, to whom the matter was delegated, to visit several towns where there were Corporation aviaries, seeking information on the subject, I felt that there was no need for any advice or help I might render, and therefore did not proffer it.

From time to time there were announcements in the local press of the progress matters were making, and being busy at the time, it was some weeks after the opening ceremony before I was able to visit Hesketh Park.

Imagine my surprise when I did so, on discovering that the site chosen was one facing almost due North, in fact, if the committee and their advisers had diligently sought for a position where they could erect a house and enclosure suitable for a Polar Bear that some townsman had presented to the Corporation, instead of a house for some of the most sun-loving creatures in creation, they could not have hit upon a more suitable place for the purpose in the whole thirty acres of the Park.

The matter has been the subject of much adverse comment, and very, I may say, vigorous censure, by bird lovers of the town in the correspondence columns of the local press, and which unfortunately I have been much too busy to take any part in; and owing to the energetic action of the Honorary local Secretary of the Society for the Protection of Birds, Mr. Walker, many of the more delicate foreigners, I believe in deference to public opinion thus aroused, were caught up, placed in cages and taken into one of the greenhouses last winter.

What has been done this Winter I do not know, and have only had time to go out there once in November to look at the birds, but from several statements in the papers I gather that they have had few, if any, deaths, and that many of the birds during the past summer have reared young. But I have no official information, and am therefore pleased to notice that the Corporation have become members of our Society; and through their Curator, Mr. Hathaway, I hope we shall be furnished with some details in regard to the inmates of this unique aviary, and particulars of its death rate, which will doubtless be of great interest to all of us.

If it is true that very few deaths have occurred and that many of the birds have bred during the past summer, it is only another confirmation of my oft-repeated remark in my contributions to this Magazine, that we none of us yet know what foreign birds really can endure in the way of climatic vicissitudes and ill usage resulting from ignorance. In justice to the Corporation I must admit that when I saw the birds last, in November, none of them, so far as a casual examination showed, seemed actually ill or *in extremis*, but many of them were very fluffy, and sat moping on their perches in a far from happy condition.

One of our esteemed members, Mr. Rothera, County Coroner for

Nottingham, is the Honorary Curator of the Nottingham Public Aviary, which, I believe, is one of the best planned and most successful in the country, and although I have never seen it, I am prepared to aver that it does not face North or anywhere near that aspect, and I venture to predict that if any member of Mr. Rothera's committee suggested erecting another aviary with such an aspect, however desirable in every other respect it might be, he would wash his hands of the whole affair, as I would myself.

It is difficult to conceive how a body of men and their advisers could be so misguided in a matter of this kind when a moment's thought would have convinced them that a site that was not even advisable for a greenhouse, could not possibly be suitable to confine, all the year round, such sun-loving creatures as God's most lovely creation, the birds.

My object in bringing this matter to the notice of this Society (a Society of which I am proud to think I was one of the pioneers and founders, and on whose Committee and Executive I have served ever since its foundation) is the hope that what public opinion here has failed to effect, viz., a removal of the aviary to a more congenial spot, may be effected by the *expert* opinion of many of our members, who, I hope will take the matter up and express themselves freely in our subsequent issues on the subject.

JOHN SERGEANT,

PASSERINE PARRAKEETS: CORDON BLEUS.

SIR,—I have a pair of Blue-winged Parrakeets in my mixed outdoor aviary, and they have stood the winter well. I should be obliged if any of the members would say if these birds are difficult to breed, and what do they like to nest in. They only have cigar boxes in the aviary. A pair of Cordon Bleus have been in good health and feather all this winter outside, but they and the other birds are driven into the inner shed at night and the door shut.

M. C. HAWKE.

[A small log nest or large cocoa-nut husk would suit them as well as anything for a nest. If a box is used the bottom must be slightly hollowed to prevent the eggs rolling about and getting cold. When young are hatched some soaked stale bread, squeezed nearly dry, should be given in addition to as great a variety of seeds as possible, and a liberal supply of green food. Mr. O. E. Cresswell bred this species in a small cage in 1892, (*cf. Avic. Mag.* Vol. II. p. 144, also *Parrakeets*, p. 73).—ED.]

IDENTIFICATION OF LORIKEET.

SIR,—Can you tell me the name of the Lorikeet described below? I have no great experience with Lorikeets, but have never seen one like it, nor can I find out from any books what its correct name is. Colour green; head bright blue-green; nape, and a wide band across the breast yellow

green; back, flight-feathers and tail leaf-green: beak reddish-yellow; eye bright red; feet dark grey. It is *rather* larger and thicker set than the Perfect Lorikeet with which it has mated. It appears to be very hardy, and bathes. I do not think it is described in *Parrakeets*. The Lorikeet comes from Macassar, Celebes Islands.

M. A. JOHNSTONE.

The following reply has been sent to Mrs. Johnstone:

I must say that I am quite unable to identify your Lorikeet. There appear to be only two species from Celebes—*Psittuteles meyeri* and *P. bonthainensis*; but neither of these quite fit your description, as neither seems to have any blue on the head. Your description in many points agrees with the Scaly-breasted Lorikeet (*P. chlorolepidotus*) of Australia, but you doubtless know this species well. I wish there were some means of comparing your bird with the specimens in the British Museum.

D. SETH-SMITH.

TREATMENT FOR A LEVAILLANT'S AMAZON PARROT:
FOOD FOR PARROTS.

To the Hon. Correspondence Secretary:

SIR,—I would feel much obliged for your advice respecting a Le Vaillant's Amazon that has been in my possession for the last two months.

He won't touch fruit, hemp seed, monkey nuts, or, in fact anything that my other Amazons partake of; eating only a very little white sunflower seed, and his digestion appears to be seriously impaired in consequence.

For a couple of hours in the morning, and also for a short period in the evening, he appears the picture of health, climbing about his cage and turning somersaults round the perches, showing every desire to be taken notice of, and offering his head to be scratched.

For the remainder of the day, however, he sits with his head under the wing coverts, and his feathers ruffled up, appearing to be constipated, and a rattling noise occasionally proceeding from his throat. I attribute his state wholly to the fact of his eating only sunflower seed, but although I have tried everything he will touch nothing except this article of diet, which I should say must, by itself, be very unwholesome unless accompanied by fruit, green food or some other special diet.

D. S. MORSE.

Mr. Morse writes later to the Hon. and Rev. Canon Dutton:

I have been again trying boiled Indian corn for the last few days

with most favourable results, the hen making a hearty meal of it in the mornings.

The Epsom salts you suggested has worked wonders, and the whole of to-day and yesterday he has not shown the slightest inclination to sleep, and appears the picture of health.

With regard to boiled maize, I have always made it the staple diet of my talking birds of both these species, several of which have been in my possession for close on twenty years, and appear in perfect health and plumage. The maize being, of course, supplemented later in the day with sunflower seed, some monkey nuts, fruit, hemp seed, etc. None of my large Parrots or Cockatoos, with the exception of a Goffin, will touch canary seed. I boil the maize over night for about an hour, leaving it to strain on a cullender which I place on a warm range in the morning, just long enough to allow the corn to be dry and warm without getting hard, and the Greys and Amazons appear to enjoy it immensely. I find it also much appreciated in this warm state by my Jendaya and Halfmoon Coures in outdoor aviary, especially in cold weather. By the way what hardy birds the Jendayas appear to be. I turned out a pair last autumn into an unheated outdoor aviary, where they have thriven splendidly, bathing even on days when their bath was frozen. I also turned out a pair of Blue-crowned Cranes, by way of experiment, in the middle of December last, and they are now in perfect health and plumage. They appeared to enjoy their first snow storm immensely, holding out their wings to catch the descending flakes and talking to each other in their extraordinary note that is more like the croaking of a Jay than anything else.

Canon Dutton, writing to Dr. Butler, re the above, remarks:

"It seems rather like my Guilding's, only mine does eat other seed. But I am increasing the sunflower, as its plumage gives me the idea of being too dry—not oily enough—and I am actually giving bread and *milk*. I don't know however that it eats any.

I am recommending a mixture of seeds, $\frac{1}{4}$ hemp, $\frac{3}{4}$ white sunflower, oats, canary, millet in equal proportions, and occasional Epsom salts for the drink.

I don't think Mr. Morse's bird *sounds* as if having much the matter, but if he keeps Amazons, he probably knows, and if he says its "not right" I suppose it is'nt.

I am proposing to send my Guilding's to the Zoo, and Dr. Mitchell suggests putting it with theirs (Mr. Rothschild's?) in a large compartment in the Fish House. If the Fish House is as warm as the Parrot House, that is an admirable idea. They might breed. But I am satisfied

these St. Vincent, St. Lucia, and Dominica Parrots want a great deal of moist heat.*

If a bird was doing well on sunflower, I should say let well alone. But then Mr. Morse doesn't think his bird is doing well.

I thought we agreed that our experiences tallied that birds rejected the boiled maize as they grew adult. I can't get the adults to look at it."

SILKWORMS; THE CEDAR BIRD; CIRL BUNTING'S SONG.

SIR,—I note a query in the *Avicultural Magazine* whether anyone has tried young silkworms for insectivorous birds. I have, and they seem to relish them if fed on mulberry leaves but refuse those fed on lettuce leaves. I now have some eggs of the silk moth which I will send to anyone who would like to try the experiment with young birds. The eggs will soon hatch if put in a moist heat. I have never seen any of my birds eat the moth itself except Chaffinches, who however reject the wings.

In regard to the Waxwing, or Cedar-bird † as it is called in North America, they eat rowan berries, cranberries, but chiefly the berry of the red cedar, which is a small slate-coloured berry about the size of a caper. I have seen them in flocks in a cedar grove in the winter when the ground was covered with snow. I think few people in England cultivate the poke berry, which is invaluable for the Mocking-bird and Cat-bird, also the wild cherry.

I have a pair of Ciril Buntings, in perfect health and plumage; they are quite tame, and the cock, in addition to his own song, imitates a Canary who is in the cage next to him, and then winds up with a Thrush-call, which I consider rather odd as I have no Thrush in my bird-room. I call him "Tommy" and he answers *chirk*, and always begins his long song with *chirk, chirck, cherree, cherree, cherree*, and then a whistle, a few soft notes which turn into a Canary trill, a pause—and then the Thrush-call. I shall persevere with him and see if he will extend his repertoire. I thought this account might interest you as I have always heard that Ciril Buntings are considered dull as cage birds.

ALYS GORTER.

THE LITTLE BUTTON QUAIL.

Turnix dussumieri.

The following extract from a letter received from Mr. W. H. St.

* From what Canon Dutton wrote to me later, it appears that he finally decided not to send his bird.

I pointed out, in reply to Canon Dutton, that my remarks applied only to Grey Parrots, if they rejected the maize.—A. G. B.

† The Waxwing, *Amphelis garrulus*, and the Cedar-bird, *A. cedrorum*, are closely allied but distinct species. See pages 365 and 366 of our last year's volume.—R. P.

Quintin (March 8th) is of much interest as, so far as we are aware, *Turnix dussumieri* has never laid eggs before in this country.

"I thought that you would be interested to hear that my Hemipodes (*T. dussumieri*), are thinking of nesting, although in a cage. They are excited and inclined to run at my hands when I am giving food, etc. The female has barely assumed her nuchal bands. Up to ten days ago I used to find thirty or forty of the spotted neck feathers daily shed about the cage. Yesterday I found an egg laid on the sand, but in no "scratch," and they had pecked a hole in it. It is like some varieties of the Tree Sparrows' eggs (coarse pepper and salt), and very little larger, but of a true "game-egg" shape. Unluckily I start for the South of France in a day or two, and I fear no good will come of it, for I have no space in a warmed aviary that I can well give up to them."

RESIGNATION of the HON. BUSINESS SECRETARY.

The Committee have accepted with regret the resignation of Mr. R. Phillipps from the post of Hon. Business Secretary. The Members do not need to be reminded of the services rendered to the Society by Mr. Phillipps ever since its foundation, but especially since his appointment of Hon. Secretary.

It is the sincere hope of the Committee that he will continue to support the Magazine by his very interesting and able contributions.

Mr. T. H. Newman has kindly consented to fill the post, to which he has been elected by the Executive Committee.

The Committee have to announce that Mr. John Sergeant has been elected to fill the seat on the Council vacated by Mr. Newman, who becomes a member of the Executive Committee.

SPECIAL NOTICE: Members are especially requested to note the alterations in the Notices on page ii. of cover.

POST MORTEM EXAMINATIONS.

RULES.

- Each bird must be forwarded, as soon after death as possible, carefully packed and postage paid, direct to Mr. ARTHUR GILL, M.R.C.V.S., Veterinary Establishment, Bexley Heath, Kent, and must be accompanied by a letter containing the fullest particulars of the case. Domestic poultry, pigeons, and Canaries cannot be dealt with. If a reply by post is required a fee of 2/6 must be enclosed.
-
- CINNAMON DOVE (Miss R. Alderson). [Bird died of hæmorrhage from the liver, which was ruptured. This may have been caused by an injury. You could have done nothing for it].
- VIOLET DOVE (Miss Alderson). [Am afraid your bird died of exhaustion from want of food, as there was not a grain to be found in the alimentary canal].
- MYNAH (Mrs. Kirkwood). Fed on boiled rice, potatoes, currants, carrot, egg, meat, and fruit occasionally. [Your bird had an apoplectic fit and was more or less comatose when you found him. When in this state for any length of time it usually proves fatal].
- VIRGINIAN NIGHTINGALE (Mrs. C. Fogg Elliot). [Your bird died of acute enteritis. Will you kindly observe Rules *re* description of symptoms and as to forwarding birds as soon after death as possible. Your other bird was too decomposed for satisfactory examination].
- RUFUS-TAILED GRASSFINCH (Mr. A. J. Darling). [Your bird died of exhaustion as a result of long standing malassimilation. These delicate birds are frequently sent over to this country in cages without any grit. There is as a result (especially with the more delicate ones) chronic indigestion produced and malassimilation of food. When later on they are provided with proper food and grit, etc., the stronger ones recover but the more delicate succumb. Before you can treat cases satisfactorily you must learn to diagnose disease, which in the delicate nites is very difficult].
- ZEBRA WAXBILL, hen. (Capt. B. Horsbrugh). [Your bird died of egg binding].
- FIREFINCH and RUFUS-TAILED GRASSFINCH (Capt. Horsbrugh). [Firefinch died of acute inflammation of bowels. Rufous-tail died of pneumonia. Many thanks for P.O. 2/6. Replies sent per post].
- TANAGER (Mrs. Noble). [Your bird was much emaciated and smelled very strongly of paraffin. The immediate cause of death was acute inflammation of the bowels. Paraffin is a very dangerous ingredient for any lotion to be applied to a large portion of any animal's body at one time, it causes so much irritation by being absorbed into the system. That it is a good parasiticide we will acknowledge, but inasmuch as insect life is far less susceptible to the effects of most drugs than are the higher animals, it necessitates a deal of care in the application of drastic remedies, and I would certainly advise the abolition of paraffin].
- GREY PARROT (Mr. Wigglesworth). [Your bird died of acute enteritis. Boiled maize alone is not sufficiently nutritious for any length of time: wheat, dari, oats, canary, millet, and a little hemp should be tried, and also fruit].
- BIBFINCH (Mrs. Robertson). [Acute pneumonia was the cause of death].
- CROSSBILL (Mr. G. C. Swales). [Your bird died of concussion of brain and I should be inclined to suspect the Tinamous].
- COCKATIEL (Mr. Moerschell). [Your bird died of acute enteritis].
[Bird from Mr. Hart too decomposed for examination].

ARTHUR GILL.



IV.

NOTICES TO MEMBERS—(Continued).

Blue-fronted Amazon, and mahogany stained stand with loose zinc trays.
Bird is free without chain, very tame, in beautiful plumage, a good mimic, an amusing pet, 50/-— ROTHERA, Hazlewood, Nottingham.

Adult breeding Budgerigars from outdoor aviary 6/6 pair, breeding husks 5d. each, rush nests for Waxbills, etc. 5d. each, cock Port Lincoln Parrakeet grand condition 25/-, Blue Mountain Lorikeet cage moulted 25/-, Green Fruit Pigeon aviary moulted 32/6, Crimson Crown Weaver full colour 10/-, Madagascar Weaver brilliant Scarlet 8/-. Oriole Weaver 4/6.
C. P. ARTHUR, Melksham.

Hen Yellow Budgerigar, six months old, 12/6.

W. T. CATLEUGH, Clyffe, Richmond Wood Road, Bournemouth.

Pair Satin Bower Birds, cock in full colour, 90/-; two ditto sex uncertain 30/- each; cock Australian Cat Bird, *Alurædus viridis*, 30/-; cock Piping Crow, 20/-; pair Bronze-winged Pigeons, *Phaps chalcoptera*, 40/-; pair Barred Shouldered Doves, *Geopelia humeralis*, 45/-; Wonga Wonga Pigeon, 15/-; two pairs Green-winged Doves, 10/- pair; pair Blue-breasted Lories, 40/-; two Scarlet Lories, one shabby plumage, 25/- and 20/- each; two Scaly-breasted Lorikeets, 15/- each; pair rare Philippine Parrots, 45/-; King Parrot, broken tail feathers, 28/-; hen Virginian Nightingale, 10/-. All the above are in perfect health.

Mrs. JOHNSTONE, Roughton Hall, Bury St. Edmunds.

WANTS.

(These are charged for at the same rate as Birds for Sale).

Pairs or single—Parrot Finches, Crimson Finches, Violet-eared Waxbills.

Miss BAMFORD, The Leys, Bedford.

Healthy hen Nonpareil. Honble. LILLA BATESON, Heslington, York.

Hen (outdoor aviary) Budgerigars—cocks in exchange; also Java Sparrows.

EDWARD BROOKES, Sutton Coldfield.

Pairs—Acclimatized Parrot Finches, Gouldians, Bleeding Heart Doves.

M. HAWKE, Wighill Park, Tadcaster.

A good hen Alario Finch wanted.

Miss M. SHARP, Spring Gardens, Ringwood, Hants.

Cock *Ruficauda* (would exchange hen); also a pair of Cockatiels.

Mrs. BARBER, Wickford, Essex.

Pair Mandarin Ducks.

G. PORTER, 38, Mill Street, Bedford.

Cock Chinese Quail, hens Crested and Bleeding-heart Pigeons.

Miss ALDERSON, Worksop.

Two hen Long-tailed Grassfinches; one hen Bichen's Finch; or will exchange cock Long-tailed Grassfinch for hen.

T. NEEDHAM WILSON, Oak Lodge, Bitterne, Southampton.

Female Black Swan, Bernicle Gander, Canada Goose, Rosy-billed Duck, Red-crested Pochard drake. Exchange Chilean Pintail drakes, Egyptian Goose.

VINER LEEDER, Swansea.

III.

NOTICES TO MEMBERS—(Continued from page ii. of cover).

NEW MEMBERS.

- Mrs. MELLOR ; Fair Lawn, Lytham, Lancs.
Mrs. DENT BROCKLEHURST ; Sudeley Castle, Winchcombe, Glos.
Mrs. HART ; Iveagh House, Measham, Atherstone.
Mr. ALFRED J. DARLING ; 52, Fore Street, Trowbridge.
Mr. JOHN LANCASTER ; Ashlawn, Rugby.
Mr. WM. BAMFORD ; Shorelea, Wellington Road, Oldham.

CANDIDATES FOR ELECTION.

- Mr. WILLIAM A. TENNANT ; Westfield, Hoddesdon, Herts.
Proposed by Mr. ATHELSTAN E. PRICE.
Mrs. SOPP ; 104, Liverpool Road, Birkdale, Southport.
Proposed by Dr. GREENE.
Mrs. H. MARTIN GIBBS ; Barrow Court, Flax Bourton, R.S.O., Somerset.
Mrs. HORLICK, Cowley Manor, Cheltenham.
Proposed by The Hon. and Rev. Canon DUTTON.

MEMBERS' SALE AND EXCHANGE COLUMN.

The charge for private advertisements is one penny for every four words. Names and addresses of advertizers must be paid for. Each statement of price, such as 3/6, is counted as one word. Every advertisement must be prepaid, and MUST reach the EDITOR not later than the 19th of each month. The Council reserve the right of refusing any advertisement they may consider undesirable.

- Lady DUNLEATH has two cock Silver Pheasants, four Silver hens, one Golden cock, one Golden hen—all 1903—for sale, 10/6 each :—address Housekeeper, Ballywalter Park, Co. Down.
Pair healthy tame Blackcaps, hen hand-reared, cock caught, perfect condition, 12/6. M. HAWKE, Wighill, Tadcaster.
Hen Bichenov's Finch in excellent condition, twice cage-moulted, 15/ or what offer. A. J. DARLING, Fore Street, Trowbridge.
Cock Black Tanager, outdoor aviary since April 1903, 20/-; cock Crested Dove, outdoor aviary since 1901, 17/6, or exchange for hen; two Saffron Finches, outdoor aviary since 1901, 6/-; cock Java Sparrow 1/-; Ring-necked Parrakeet, outdoor aviary since 1900, cock of pair that has frequently bred, 6/6.
G. C. PORTER, 38, Mill Street, Bedford.
Pairs—Picui and Scaly Doves, 20/- pair; Diuca Finches, 12/6. Cocks—Bronzewing Pigeon 22/-; Picui Dove 9/-, All in fine plumage and acclimatised. Miss ALDERSON, Worksop.

(Continued on opposite page.)

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THE JOURNAL OF THE AVICULTURAL SOCIETY.

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LONDON:

R. H. PORTER, 7, PRINCES ST., GAVENDISH SQUARE, W.

NOTE.—A new volume commences every November.

☛ All Subscriptions should be sent to the Honorary Business Secretary.

THE AVICULTURAL SOCIETY.



Persons wishing to join the AVICULTURAL SOCIETY are requested to communicate with either of the Hon. Secretaries or the Editor.

NOTICES TO MEMBERS.

The Subscription to the Avicultural Society is 10/- per annum, due on the 1st of November in each year, and is payable in advance. The entrance fee is 10.6. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

All MSS. for publication in the *Magazine*, *Books for Review*, and *Private Advertisements* should be addressed to the Editor, Mr. D. SETH-SMITH, Glengarry, Canning Road, Addiscombe, Surrey.

All *Queries respecting Birds* (except *post mortem* cases) should be addressed to the Honorary Correspondence Secretary, Dr. A. G. BUTLER, 124, Beckenham Road, Beckenham, Kent.

All other correspondence, and Subscriptions, should be sent to the Honorary Business Secretary, Mr. T. H. NEWMAN, 20, Montpelier Square, London, S.W. Any change of address should be at once notified to him.

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(Continued on page iii. of cover).

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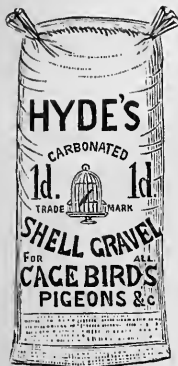
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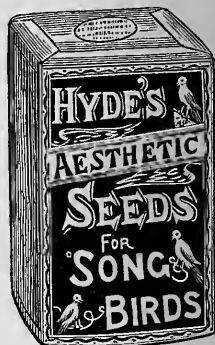
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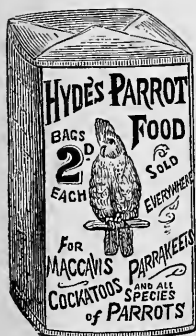
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The "BLACKPOOL GAZETTE" of Dec. 4th

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THE
BIRDS OF TENNYSON,

BY
WATKIN WATKINS, B.A. CANTAB.

Member of the British Ornithologists' Union.

"Many as are the volumes which have been written on different phases and aspects of our late Laureate's works, this, we think, is the first time that a whole book has been devoted to "The Birds of Tennyson." Mr. W. Watkins, the author, is a member of the British Ornithologists' Union, and has, therefore, a scientific as well as a literary interest in the subject. And his verdict in the matter is this—that 'No poet is so satisfactory to the ornithologist [as Tennyson], for no poet had a more accurate knowledge of birds or had a happier power of describing their peculiarities.' Mr. Watkins' pages are, indeed, themselves a testimony to the acuteness as well as the frequency with which Tennyson described the 'feathered tribe.' All this, of course, is an old story to the students of the poet, but it is pleasant to find Tennyson's references to birds collected and systematised as they are in this agreeable treatise, which is, as it should be, carefully and usefully indexed. In his introduction Mr. Watkins deals with Tennyson's allusions to birds in general, and in subsequent chapters discourses successively of birds of song, birds of passage, birds of prey, birds of sport and so forth. The result should convince those who are not already convinced that as a poet of the birds Tennyson ranks with Shakespeare. Mr. Watkins, as a naturalist, of course appreciates fully the poet's stanzas on 'The Thrush,' of which the ignorant have been accustomed to make game. He recognises the fidelity with which the bird's 'note' is reflected in such lines, homely enough, as—

Summer is coming, summer is coming,
I know it, I know it, I know it.'

And he gives other instances of the poet's successful translation of birds' song into literary speech."—*The Globe*.

"Lovers and all in quest of unhackneyed forms of endearment could not do better than add to their possessions a copy of 'The Birds of Tennyson,' by Watkin Watkins. The book is a well-compiled number of extracts from the poems of Tennyson, Wordsworth, Shakespeare, Byron, Chaucer, Milton, Cowper, and other poets, in which the manners and customs of birds are introduced as similes, in dainty lines. The volume contains some excellent illustrations of birds by G. E. Lodge."—*Pall Mall Gazette*.

"Mr. Watkins, who must have spent a vast deal of time in the study of Tennyson's poetry from the natural history point of view, publishes a number of extracts, and enlarges on them in a most interesting manner. Mr. Watkins' book should prove very acceptable to Tennyson lovers."—*The Yorkshire Post*.

"'The Birds of Tennyson' should have a strong attraction, for its well-written pages are a powerful proof of the great influence exercised upon the impressionable mind of the poet by the beauties of form and the joyous songs of the feathered kingdom. There is another class of readers who should also find much pleasure in a perusal of the volume—those lovers of Tennyson as a poet who, not taking any special thought about birds, will be astonished to find how much their favourite poet knew about them and how narrowly he observed the life that moved about him. They will find, too, by the aid of Mr. Watkins' comments as an expert, how appropriately Tennyson employed his innumerable references to birds of all kinds, and especially song birds. Excellent illustrations by G. E. Lodge enhance the value of the volume."—*The Shrewsbury Chronicle*.

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PHAPS ELEGANS AND NEST.

1. Female on nest, male perched near.
2. Nestling 16 days old.
3. Male covering nestling.

Avicultural Magazine,

BEING THE JOURNAL OF THE
AVICULTURAL SOCIETY.

New Series.—VOL. II.—NO. 7.—All rights reserved.

MAY, 1904.

NOTES ON THE HABITS IN CAPTIVITY OF THE BRUSH BRONZEWING PIGEON.

Phaps elegans.

By D. SETH-SMITH, F.Z.S., M.B.O.U.

There has always been to the present writer a certain amount of fascination in the Pigeons and Doves of Australia; there is something far more attractive about the Australian birds in general than about those of other parts of the world, with of course a few notable exceptions: the Parrakeets, for instance, of the Antipodes are much more attractive in every way than those of Asia or America. Amongst the Doves of Australia there are many that we rarely if ever see alive in this country, though others, such as the Diamond, the Common and Crested Bronzewings, and the Peaceful Doves come over fairly regularly. Often have I wished, when studying the magnificent works of Gould, that I should some day have an opportunity of keeping such birds as the Harlequin Bronzewing (*Histriophaps histrionica*), the Partridge Bronzewing (*Geophaps scripta*), or the Brush Bronzewing; hence it was with much pleasure that I beheld, on the 11th of January last, three healthy specimens of the last-mentioned species—two males and a female—in the shop of a London bird-dealer, and, after the usual bargaining, secured them as my own.

My experience of the Common Bronzewing Pigeon (*Phaps chalcoptera*) is that some specimens are extremely tame, whereas others are quite the reverse. Perhaps it is the same with

Phaps elegans; at any rate my three specimens are the tamest Doves I have ever known. When I took them home I put all three into a warmed aviary, and immediately they got out of the travelling cage the two cocks commenced to coo and bow to the hen and to pick up small sticks, with the idea of starting housekeeping forthwith. My presence did not affect them in the least, and they walked about round and between my legs as though they had known me all their lives.

High up in this aviary there were some large bundles of brushwood securely fastened to the walls and roof, and on one of these the Bronzewings commenced to build a nest in earnest within two or three days of their arrival from a London dealer's shop. All three seemed to be building the nest together at first, but I noticed that one of the cocks appeared to be more in favour than the other, so he was left as the happy husband of the only lady, and the other was removed to spend some few months at least of his life in single blessedness.

Nest-building now went on in earnest, the hen remaining aloft whilst the cock fetched twig after twig. I noticed in this case a habit that I have before observed with some other Doves, namely that, when building, the cock generally alights with a piece of twig on the back of the hen, the object being doubtless to avoid disarranging the nest. Having settled on her back he bends his head over hers, and she takes the twig and arranges it in its place while he descends for another.

On January the 21st, just ten days after their arrival, the first egg was laid, the second following next day, and the birds commenced to sit, the cock during the day and the hen at night. On February the 9th one young bird was hatched, the second egg being clear. This youngster received the most devoted attention from its parents at first, but later I noticed signs that all was not going on as well as it should be.

The following appears in my bird diary :

- “ Feb. 21. Young *P. elegans* getting well fledged, parents appear now to cover it only at night.
 “ Feb. 22. Parents appear to be anxious to nest again—bad sign.

- " Feb. 23. Parents building another nest, but continue to feed young one.
- " Feb. 24. Young one nearly fledged.
- " March 2. Two eggs in new nest, birds sitting. Young one appears to have very little in its crop.
- " March 3. Young bird on ground in very bad way, very weak and evidently starved. Try to hand feed it but fail. Put it back in nest, and later notice cock trying to feed it, but it is evidently too far gone.
- " March 4. Young *P. elegans* dead."

Such is the miserable history of, possibly, the first young Brush Bronzewing Pigeon hatched in England. It is a repetition of what has happened before in my own and other aviaries with other species of foreign Doves. This strong desire on the part of birds to nest a second time, before the first brood can shift for themselves, is a trouble that, I must admit, I cannot account for, but which is well known amongst aviculturists to occur with other birds besides Doves.

The bachelor had all this while contented himself, when not eating or sleeping, with cooing. The note is not unmusical, but when it is repeated, "hoop, hoop, hoop," at intervals of about one second throughout the greater part of the day, it becomes somewhat monotonous, and this bird generally went by the name of "the hooter." It occurred to me that this continually-repeated call-note might perhaps have unsettled the breeding birds, and have been partly accountable for their want of success in rearing the young one; so I persuaded my brother to allow my bird to "hoot" for a while in his aviary at Caterham, where there would be no chance of its voice being heard by the others.

The days were now lengthening, and I hoped the birds would behave better with their second brood; but still I have so far only partial success to record.

"April 5. Two young nearly fledged, evidently a true pair, one showing much more buff on the forehead than the other. Parents inclined to nest again, but at present feed the young well.

" April 8. Parents building hard. Put a sack over the nesting site to check them, as the young appear to be neglected.

" April 9. Young ones with empty crops. As the hen has not been seen to feed them for days, remove her from the aviary. Cock, having no hen to attract his attention, takes to the young again and feeds them well. Hen laid egg in other aviary."

I believe, had I left the hen, the young would not have been looked at again, but having removed her all went well for a few days. Soon, however, the cock began to get restless and discontented, cooing for the hen continually, and the young did not appear to be doing very well. As I write (April 14th) one is strong and well, though does not appear to feed itself; it looks like living: but the other is decidedly weak though there was food in its crop when last examined. I have decided to try the hen with the other male in the large wire aviary now that the weather is warmer, and hope for complete success next time.

(To be continued).

ROCK THRUSHES AT RIVA.

By Mrs. RATHBORNE.

Being very much interested in the Blue and Pied Rock Thrushes, my husband and I thought we would combine ornithology with our little summer trip last year, and look up these interesting birds in their native haunts.

Solely from its appearance on the map, we selected the little village of Riva at the top of Lago Garda as a likely place, we knew absolutely nothing about it, or how to get to it, but it looked as if it ought to be pretty and above all "Rock Thrushy." So, calling Dean and Dawson's very kind agent into consultation, we managed to get booked through to Desanzano at the foot of Lago Garda, from whence a large steamer brought us up the lake to Riva.

The scenery was exquisite in the brilliant sunshine, and the orange houses, vineyards, and olive groves made it quite typical

of the South. Our spirits rose high as we sat sipping coffee in the lovely wooded garden of Mr. Weizmann's comfortable Hotel de Lac, surrounded by the warbling of innumerable Nightingales and Blackcaps, while the cool Ora breeze from the lake wafted around us the perfume of thousands of pale pink roses.

We were up betimes next morning, and made our way to the foot of some high absolutely precipitous cliffs, at the foot of which were strewn large boulders and shingle; as we struggled and scrambled over these we paused to rest, when, suddenly from far above us on the face of the cliff, burst forth the most exquisitely wild and operatic whistling—it was the Blue Rock Thrush—far up we saw him flying from ledge to ledge with slow hovering flight; whilst lower down our delighted eyes discovered our little pied friend jerking up and down in a very Chat like manner. After this we saw them everywhere where there were cliffs, in fours and fives, the blue predominating. We even saw them pilfering down in the cherry gardens that ranged along the foot of the rocks; we could also see where they had their nests, but could not possibly get at them, so hearing that broods of young were occasionally brought into the villages round, we spent many weary hours walking through every high-way and bye-way of Riva and Torbole, gazing up at every window and into every cage until I am sure the people thought we were demented. We found several nice adult birds by their song, but, as unfortunately we did not know a word of Italian except "*Passera solitaria*" which we learnt from the *Avicultural Magazine*,* we were too shy to tackle their owners.

At length one day my heart nearly stopped beating, for there, outside a grocer's door, hung the object of our search, four Rock Thrushes, two of which were unmistakably young blues, and unmistakably a pair; the owner, a jolly fat man, stood at the door with his thumbs in the armholes of his waistcoat, and such a benevolent look on his face that, without counting the cost, we rushed up to him pointing wildly at the birds and repeating "*Passera solitaria*." He immediately burst into voluble Italian and we collapsed and fled!

* Vol. III., p. 101.

I spent the rest of that day trying to pick out suitable sentences from our Italian conversation book but, alas it was all "How many waistcoats has your grandfather," and such like sentences; but I managed to extract "*uccello canoro*"—"quanto costa"—and "*troppo*"; and, armed with these, went back next day. As we neared the shop our hearts failed; we passed it and passed it again. "You go up and ask him," I said to my husband; but he would not see it, so I had to take my courage in my hand and face him. "*Buón giorno*" I said. Much bowing and smiling from our jolly friend followed—"Passera solitaria" I ventured. Down came the cage, and much voluble Italian ensued. As soon as a pause came I jerked out "*uccello canoro*"—I don't know why, but it was the next word on my bit of paper, and I felt I must say something. There was great gush at this, evidently extolling the beauty of the "*canoro*." "*Quanto costa?*" came next—30 Kroner for the two. My husband, who had by this time ventured into the shop, joined in the emphatic "*troppo*," and we left for that day.

Three days after we came back, and this time I felt like an old friend, so stated the "*Quanto costa*" gaily. It was still 30 Kroner. I looked indignant and pointed to the hen saying severely "*non canoro*." He looked bewildered, as I pointed to the cock and said "*canoro*"; then to the hen saying "*Non canoro*." He fairly beamed then and pointed first to the cock and then to my husband and from the hen to me! At last we got him down to 20 Kroner, when unfortunately, in my eloquent gesticulations, I sent my elbow through a show case on the counter—of course he bowed and smiled, and I suppose said it did not matter; but I hastened to end the bargain at the price mentioned, and he threw in a bag of Indian meal and polenta to feed them on.

I brought these birds home here in triumph. The people in the train were much amused when they saw us feeding them with a bit of stick, but they lived and thrived until, to my everlasting sorrow and regret, a strange blue cock got out in the aviary and killed the hen. The little Riva cock revenged his sister by slaying her murderer through the bars of

his prison and now reigns supreme, delighting us with his lovely song, which calls up the merry happy time we spent at beautiful Riva.

ON THE NESTING HABITS OF THE BRUSH TURKEY.

Talegalla lathami.

By A. E. L. BERTLING,

Head Keeper of the Zoological Society's Gardens.

Having read Mr. St. Quintin's most interesting communication in the March number of the Magazine, on the Brush Turkeys in his possession, and thinking some of our members may care to know the actual method in which the eggs are deposited, I subjoin the following account as an appendix to his paper.

The hens I think have perhaps the easiest time in family arrangements—unless there is any particular strain in passing the unusually large white egg—as her partner not only prepares the receptacle for them, but takes care of the eggs afterwards.

As far as I have observed from the birds now in the Zoological Society's collection, the hens lay at intervals of about five days. Shortly before the female is ready to produce the egg the male opens the mound at the top, throwing out the material until the heap assumes the shape of a volcanic crater. When he has completed this to his satisfaction the hen prepares to deposit her egg by scratching a small hole on the interior wall of the mound, the cock anxiously looking on as if to superintend matters. When this small hole is ready she stands over it in a somewhat crouching attitude but with head and neck erect, her wings and tail being spread as if to prevent anyone from seeing what is about to take place.

The cock, who is exceedingly amorous,—in fact, so much so, that I wonder the females are not frequently killed—meanwhile walks round his mate in a very restless manner, occasionally peeping under her spread wings as if in a hurry for matters to come to a conclusion.

After standing in this position for about three minutes the egg is laid, and the hen immediately scrambles over it some of the warm material from the inner side of the mound, stamping it firmly down, and, at the same time, rotating first one way and then the other. When this is completed she leaves the heap, the cock then putting the finishing touch by filling up the large cavity he excavated in the first place.

It is surprising that many of the eggs do not get broken, considering the rough treatment they undergo by being stamped upon, as they are particularly thin-shelled; but what has puzzled me most is the question: "how does the male know the exact moment that the female is about to lay?" for he opens the heap at the right moment. Is it purely instinct, or an absolute knowledge of the lapse of time? He frequently removes some material from the upper portion of the mound, either to reduce the heat or to air the eggs, but not to such an extent as when the hen is ready to lay.

The temperature of this mound, which I tested at ten o'clock in the morning, was, at the side where the hens were observed to lay most frequently, 109° Fahr., *i.e.*, near the surface, whilst on the opposite side the thermometer rose to 84° only, and deeper down in the mound to 65°. By this it would seem that the upper portion only generates the heat to any considerable extent. The external temperature at that time was 54°. The mound is composed of leaf mould, lawn mowings, light loam, decaying leaves and fern bracken, to which a barrow-full of short, broken hay, straw, and clover is occasionally added, as it mixes well with the other materials and prevents the decaying grass from running the temperature too high, which it has a tendency to do, and helps to shoot off some of the rain which generally arrives when least wanted.

There are, to my belief, a number of eggs in the mound at the present time, laid by two hens, and I am hoping to be able to write a further paper later, treating on the hatching and growth of the chicks, should we be so lucky as to get any.

ON THE DIFFICULTY OF SEXING BICHENO'S FINCH.

By ARTHUR G. BUTLER, Ph.D.

Most dealers will tell you that *Sticteptera bichenovii* can be readily sexed by the width of the black bands encircling the throat and breast; but the late Mr. Joseph Abrahams relied more upon the superior size and darker crown of the cock bird; nevertheless that even he, with his vast experience, was sometimes wrong in his determinations, is evident from the following facts.

In 1899 Mr. Abrahams wrote to me that he wished me to try for the Bicheno \times Zebra-finch hybrid; therefore about August of that year he sent me a bird which purported to be a cock Bicheno's Finch. I at once paired it up with a hen Zebra-Finch, putting the pair into one of my flight-cages and providing them with a nesting receptacle and building material; the two birds simply ignored one another, one roosting in the nest-box at night and the other outside.

Seeing that the supposed cock had very narrow bands across throat and breast, I wrote and told Mr. Abrahams that I thought he must have inadvertently sent me a hen in mistake for a cock. He replied that he had been very busy at the time, so that it was just possible he might have done so; he was now, however, sending me another bird which he was quite confident was a genuine male: with his usual generosity he desired me to keep both, and see what I could do with them.

Strangely enough the hen Zebra-finch with the first bird died egg-bound; and that with the second bird was twice egg-bound previous to April 1900; although no nests had been built in either cage. On April 15th the first Bicheno's Finch was taken ill, and died that night.

In the case of the second bird—the "genuine male," although I changed its hen several times, there was no result up to February 1903. Thinking that, in this case as in the other, the sexing might have been wrong, I now substituted a cock Zebra-finch for the hen. The two birds became quite friendly, went to roost together, but no eggs were laid.

In February 1904 I turned the Bicheno's Finch out into my long covered aviary; and was interested, shortly afterwards, to notice its appropriation of one of the Hartz-cages, which it defended against all comers: after all, I thought, this bird must surely be, as Mr. Abrahams said "a genuine male"; but I could not make up my mind as to what bird it intended to take to wife: at times I saw it apparently conversing with a hen Zebra-finch (the only bird in the aviary which spoke its language), yet at other times it seemed to take no notice of her.

The bird was in excellent health, and I confidently looked forward to a reward for all my patience and perseverance; when (to my horror), on March 28th, I discovered this "genuine male" panting on the floor of the aviary, evidently very badly egg-bound. She died about two hours later.

If all the sexual characters upon which Mr. Abrahams relied fail in this species, how shall we distinguish the cock from the hen: that so excellent a judge should have sent me two hens as cocks, is I think clear proof that the true sexual differences in *Stictoptera bichenovii* have yet to be discovered, and one needs a small flock in order to study these differences.

BIRDS BY AN IRISH STREAM IN WINTER.

By W. H. WORKMAN, M.B.O.U.

For a long time I had wanted to visit a pretty County Antrim stream that flows into Lough Neagh, and at last the opportunity came and my friend and I started off by an early train to this pretty spot. There is nothing like getting away early on the short winter days if one wants the brightest part of the day for observing the birds of the district visited.

We arrive at our destination by 10 o'clock and immediately make for the stream which runs at the far end of this typical North of Ireland village. We get off the road as soon as possible and strike across the fields to the water's edge: at this time of year it is a fast flowing little river swelled by the recent rains. We do not go very far before we come across some Magpies, but on trying to approach they soon put the stream and fields

between us and them. Shortly after we come upon a pair of Blue Tits feeding in a Larch; I am certain they are a pair for, no matter where one flies the other follows at once. I wonder if these little birds pair for life? It certainly looks like it in this case. Not far off a Wren is feeding up and down the branches and round the roots of an old tree. This time last year out in Algiers I heard the Wrens singing most beautifully just as they do with us in late spring. It is wonderful how tame these little birds are. I remember once when trying the pattern of a new 12-bore gun, noticing how tame Blue and Coal Tits were, for in a hedge within two yards of me they fed while I fired off cartridge after cartridge; it did not seem to disturb them in the least.

Now we are at a bend of the stream and have to get over a high fence before we again reach the river's edge. I stop suddenly and signal to my friend not to move for there, perched on a stone at the other side of the river, is what I take to be a Dipper. Up go our glasses and we carefully examine this little bird which is new to me except in pictures and mounted specimens, and nothing that I know of gives more pleasure than seeing a species new to one, except perhaps the finding of a new one, but that is a state of bliss awarded to very few ornithologists; and these occasions will be fewer and fewer as the darker parts of our globe become more civilised, and I am afraid in many cases spoilt from a Naturalist's point of view. For myself I always look back with pleasure on those red-letter days when I have seen something new to me. Well do I remember my first view of Golden Plover in breeding plumage on the Island of Canna, and Buzzards at another place on the West Coast of Scotland. But to return to our Dippers or Water Ouzels; we follow them down the river until they turn and fly back—we have heard that the different pairs of this species have their regular beats on the river, and shortly after we come on another pair. One can only make out the white throat-patch poised above a stone, as the brown water blends so well with the colouring of the bird, making it quite impossible to see the outline. We have now reached the bridge, and the Dippers coming here to the end of their beat turn and fly up stream.

Crossing the road we get on to the river again, passing on

our way an old flax mill now peopled only by Jackdaws, and in the trees round about we notice several Rooks. Soon after my friend notices some Redpolls and, away to the left, I spot some Ivy-covered trees which might contain an Owl, so we cut across the fields, but draw a blank. As we return I put up a Snipe from a marshy place, and shortly afterwards a great Grey Heron flaps slowly over our heads.

We now make straight for Lough Neagh, passing on the way numbers of Blackbirds, Thrushes, House Sparrows and Chaffinches, in a few minutes arriving at the edge of the great inland sea that has been more or less shrouded in mystery from the days when Thomas Moore wrote—

“On Lough Neagh’s banks as the fisherman strays
When the clear cool eve’s declining,
He sees the round towers of other days
In the waves beneath him shining.”

Recently there have been discussions in the daily papers about the strange booming heard by the farmers round the lough, as if great guns were practising, and nobody seems to be able to explain it, altho’ the same thing has been heard on some large American lakes.

But to return to our birds—soon after we reach the edge we come on some Meadow and Rock Pipits who alight quite close and do not seem to mind us in the least. Now we enter a thick Willow bed. What are the brightly coloured birds I see flying out at the other side? We follow as noiselessly as possible and soon come on a flock of Bullfinches, all the males in splendid colour. It is a strange thing why a Bullfinch should lose its beautiful colouring so much more than any other cage bird; those I have seen kept in small cages, after a time changed to a dull brown tint and, but for their shape, one could hardly have told what they were. I have often wondered why this is so when small foreign birds of the parrot and finch tribe keep their brilliant colouring so well.

We now near the river again. This is a great place for bird life, and I note tracks of many waders in the soft mud at the river’s mouth. Out to sea is a large flock of Ducks, some sleeping and others keeping watch. One does not often catch a

wild duck napping. I believe these are Golden Eye (*Clangula glaucion*) but the distance is great and light in a winter afternoon is not the best for a high-power reflecting glass.

Round about us are Willows where many birds, such as Great Tits, Sparrows, and numbers of other common birds are feeding. We now turn train-ward, following the stream towards the station, just as we start out flies a Waterhen from the near bank and makes off towards the reed-beds at the mouth. Now a flock of Wood-Pigeons fly across our path in their usual out-of-range-hurry style. A large flock of Thrush-like birds alight in a field in front, and, on a nearer approach we find them to be those most wary of birds, Fieldfares, accompanied as usual with a few Missel Thrushes and numbers of the ubiquitous Starling. Passing this by we reach a hedge covered with bright red berries—a splendid feast for numbers of the small birds, and here we come across Yellow-hammers as yellow as Canaries, Hedge Sparrows, Linnets, Corn Buntings, Chaffinches, and many other birds I had not time to identify. As our time is now limited we make for the station after having had a pleasant day with nature, noting about twenty-three different species of birds.

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

The most noteworthy additions to the Gardens for the month of March, a list of which is given below, are the Schuett's and Jackson's Francolins from Central East Africa, both species being new to the collection.

MAR. 7.	1	White-fronted Amazon (<i>Chrysotis leucocephala</i>)	..	Cuba.
„	7.	1 Lesser Vasa Parrot (<i>Coracopsis nigra</i>)	..	Madagascar.
„	11.	2 Himalayan Monauls (<i>Lophophorus impeyanus</i>) ♂ ♀		Himalayas.
„	14.	2 Hybrid Parrakeets (between <i>Platycercus semitorquatus</i> and <i>Platycercus barnardi</i>)		Australia.
„	15.	1 Hybrid Pheasant (between <i>Euplocamus nycthemerus</i> and <i>Phasianus reevesi</i>) ♂		Bred in England.
„	15.	1 Blue-necked Cassowary (<i>Casuaris intensus</i>)		New Guinea.
„	15.	4 Dusky Francolins (<i>Francolinus infuscatus</i>)		Central East Africa.
„	15.	2 Schuett's Francolins (<i>Francolinus schuetti</i>)	„	„
„	15.	2 Jackson's Francolins (<i>Francolinus jacksoni</i>)	„	„
„	18.	1 Greater Sulphur-crested Cockatoo (<i>Cacatua galerita</i>)		Australia.

„ 18.	2 Eastern Sarus Cranes (<i>Grus antigone</i>)	..	India.
„ 21.	2 Yellow-eyed Babblers (<i>Pyctorhis sinensis</i>)	..	„
„ 21.	2 Sepoy Finches (<i>Hæmalospiza sipahi</i>)	..	„
„ 21.	1 Purple-capped Iory (<i>Lorius domicella</i>), var.	..	Moluccas.
„ 21.	2 Wharton's Fruit Pigeons (<i>Carpophaga whartoni</i>)		Christmas Island.
„ 21.	1 Hybrid Duck (between <i>Melopiana peposaca</i> and <i>Fuligula rufina</i>)		Europe.
„ 21.	1 Hybrid Duck (between <i>Æx sponsa</i> and <i>Dafila spinicauda</i>)		„
„ 21.	1 Lesser Sulphur-crested Cockatoo (<i>Cacatua sulphurea</i>)		Moluccas.
„ 22.	3 Japanese Pheasants (<i>Phasianus versicolor</i>) ♂ ♀ ♀	..	Japan.
„ 22.	3 Bar-tailed Pheasants (<i>Phasianus reevesi</i>) ♂ ♀ ♀	..	N. China.
„ 22.	2 Amherst Pheasants (<i>Thaumalea amherstiae</i>) ♀ ♀	..	China.
„ 22.	2 Silver Pheasants (<i>Euplocamus nycthemerus</i>) ♀ ♀	..	„
„ 22.	2 Mantchurian Crossoptilons (<i>Crossoptilon mantchuricum</i>) ♂ ♀		N. China.
„ 23.	1 Hybrid Pheasant (between <i>Euplocamus nycthemerus</i> and <i>Phasianus reevesi</i>) ♂		Bred in Gloucestershire.
„ 23.	3 Rosy Pastors (<i>Pastor roseus</i>)	..	India.
„ 23.	1 Bateleur Eagle (<i>Helolarsus ecaudatus</i>)	..	Africa.
„ 23.	1 Jardine's Parrot (<i>Pæocephalus gullielmi</i>)	..	W. Africa.
„ 24.	4 Common Pheasants (<i>Phasianus colchicus</i>) 4 ♀	..	Gt. Britain.
„ 24.	1 White-eared Bulbul (<i>Pycnonotus leucotis</i>)	..	India.
„ 28.	2 Crowned Cranes (<i>Balearica pavonina</i>)		Lagos, W. Africa.
„ 30.	2 Bare-eyed Cockatoos (<i>Cacatua gymnopsis</i>)	..	S. Australia.
„ 31.	1 Shining Weaver Bird (<i>Hypochera nilens</i>)	..	Africa.
„ 31.	1 Orange Weaver Bird (<i>Euplectes franciscana</i>)		N. E. Africa.
„ 31.	2 Red-headed Weaver Birds (<i>Foudia madagascariensis</i>)		Madagascar.
„ 31.	4 Amaduvade Finches (<i>Estrela amandava</i>)	..	India.
„ 31.	1 Banded Grassfinch (<i>Pæphila cincta</i>)	..	Australia.
„ 31.	1 Fire-tailed Finch (<i>Erythrura prasina</i>)	..	Java.
„ 31.	3 African Silverbills (<i>Munia cantans</i>)		N. E. Africa.
„ 31.	1 Common Waxbill (<i>Estrela cinerea</i>)	..	W. Africa.

REVIEWS.

A NATURALIST IN THE GUIANAS.*

This handsome volume contains a record of two expeditions undertaken by the author into almost unknown parts of Venezuela; expeditions fraught with the utmost difficulty and

* *A Naturalist in the Guianas.* By EUGENE ANDRÉ. With a preface by Dr. J. SCOTT KELTIE. With thirty-four illustrations and a map. London: SMITH, ELDER, and Co. Price 14/- net.





YOUNG OF THE SNOWY EGRET.
Ardea candidissima.

From "A Naturalist in the Guianas."

danger, seeing that the rivers, the only highways in a densely wooded country, contain innumerable rapids through which only small boats can be navigated.

Following the Orinoco as far as Niapire, the author then proceeded to explore the Caura, in the first expedition (1897-98) reaching Temblador, and in the second (1900-01) the Mountain Améha which he intended if possible to climb, but was unable. The hardships endured during this expedition would certainly have killed most men, and on several occasions it looked very much as if the author would never live to return home. For long distances the country is uninhabited by human beings, and it is consequently impossible to procure provisions; and the immense difficulty of transporting sufficient for the long journey in the moderate-sized dug-outs can be imagined. At the very commencement of the return journey the largest boat, containing all the provisions, collections, journal containing extensive notes, and in fact everything that was of most value to the party, was wrecked in an attempt to navigate the Arachi Rapids, and starvation stared the expedition in the face. Two natives deserted, and the guide died of starvation.

Through all this trying expedition the author carefully studied the natural history of the country through which he passed, and his notes on the birds especially are very interesting. When writing of the Tonca-bean, the gathering of which forms one of the principal industries in the country, the author tells us that "during the months of October and November, while the fruit is still quite small and green, the large Macaws and several other members of the Parrot family commit great havoc upon the young crop. No birds are more extravagant than Parrots in their method of feeding, not so much on account of what they consume as of what they waste. Wherever these birds have eaten, the ground is strewn with fruit only chewed and then awkwardly dropped, or perhaps with just a small piece bitten off. Hence the destruction before maturity of enormous quantities of this valuable product."

Of the Bell-bird the author observes:—"The *Campanero*, 'the bellman,' as the natives call the bird, is rarely met with in the neighbourhood of cultivated spots. The presence of man

appears distasteful to this lover of primeval forests, and if his domain be encroached upon by human beings, he immediately abandons it to retire to some distant recess, where he can enjoy the solitude he loves so well."

One of the chief exports of the town of Ciudad-Bolivar on the Orinoco consists of feathers, chiefly the plumes of two species of Egrets, which can only be obtained in the breeding season. "The small Egret (*Ardea candidissima*) produces the most valuable plumes; from the larger birds (*Ardea garzetta*) a coarser feather is obtained which is not so much appreciated, but the wily dealer can sort his plumes so as to introduce a fair proportion of the inferior article without danger of detection. Quite a number of birds have to be slaughtered to produce a pound of feathers, only a few drooping plumes from the backs of the birds being taken. The season for collecting extends through the months of June, July, and August; that is, through the mating and breeding period. . . . In spite of the slaughter of thousands of these birds, the *garceros* continue to be used by the Egrets, but in ever diminishing numbers. The beauty of a few feathers on their backs will be the cause of their extinction. The love of adornment common to most animals is the source of their troubles. The graceful plumes which they doubtless admire in each other have appealed to the most destructive of all animals. They are doomed, because the women of civilised countries continue to have the same fondness for feathers and ornaments characteristic of savage tribes."

The trees on some of the islands in the Caura were frequently used by whole colonies of Hang-nests which were rearing their young at the time our author ascended the river. "Some of the trees were literally covered with nests placed so close together that it would be impossible to find room for an additional one. The biggest colonies were those of the Yellow Cassique (*Cassicus albirostris*) and the Scarlet-backed Cassique (*Cassicus hæmorrhous*). . . . Both Cassiques are favourite cage-birds in Venezuela, but the yellow variety, being commoner, is seen much more frequently in houses than the other. While in Venezuela the Yellow Cassique is called *Arrendajo*, it is known as *Oropéndola* in Colombia."





PRINCE OF WALES' PHEASANT.

Phasianus principalis.

From Tegetmeier's Pheasants.

Two coloured plates of birds, and many charming black and white illustrations grace the pages of this very interesting volume. One of the latter is reproduced with this notice by the kind permission of the publishers.

PHEASANTS.*

This standard work of the veteran ornithologist, Mr. Tegetmeier, is so well known to all who take any interest in the magnificent group of which it treats, that there is not much to be said in introducing it to our members. No one who keeps Pheasants, either for the covert or in the aviary, can possibly afford to be without this book. The advice as to the treatment of the birds and the rearing of their young is sound and practical to a degree, and we may say that nearly everything that is worth knowing about Pheasants can be learnt from its pages.

The fourth edition which is now published is enlarged and brought thoroughly up to date, and although it is, as before, offered at the very moderate price of 7/6, no less than six very beautiful coloured plates are given, in addition to the numerous black plates and text illustrations that have appeared in the former editions.

The coloured plates represent the Mongolian Pheasant (*Phasianus mongolicus*), the Common Pheasant (*P. colchicus*), the Chinese Pheasant (*P. torquatus*), the Japanese Pheasant (*P. versicolor*), Reeve's Pheasant (*P. reevesi*), and Hagenbeck's Pheasant (*P. hagenbeckii*). They have been drawn by Mr. Frohawk, and reproduced by the three-colour process, which in this case has been eminently successful, the pictures being barely distinguishable by the ordinary individual from good chromos. Hagenbeck's Pheasant is a magnificent form, inhabiting the Kobdo Valley, N. W. Mongolia. It was described by the Hon. Walter Rothschild at a meeting of the British Ornithologists' Club, on Nov. 20th, 1901: and in April 1903 a large number of Pheasants, apparently belonging to this identical form, were

* *Pheasants, their natural history and Practical Management.* By W. B. TEGETMEIER, F.Z.S. Fourth Edition, enlarged. London: HORACE COX, *The Field Office*, Bream's Buildings, E.C. Price 7/6.

exposed for sale in the London Markets, having arrived in a frozen state. This Pheasant has not, up to the present time, been seen in a living state in this country, though Mr. Tegetmeier tells us that a variety of the common Pheasant which can hardly be distinguished from *P. hagenbecki*, occasionally appears in the coverts at Elsenham and elsewhere.

One of the most interesting and satisfactory introductions of late years is the fine species known as the Prince of Wales's Pheasant (*P. principalis*), from North Afghanistan, which is ornamented by pure white wing-coverts. It was described by Mr. Sclater in 1885, and shortly after some living specimens were received at the Zoological Gardens, but these, unfortunately, died without having produced any young. In February, 1903, Colonel Marsden Sunderland imported a large number of these Pheasants, and turned them down into large enclosures in Hampshire, where they laid very freely, the eggs hatched exceedingly well and numbers were reared successfully. A magnificent male of the year which had been reared wild was exhibited stuffed, at a meeting of the British Ornithologist's Club in December last, as well as a female in the flesh. By the kind permission of the publishers we give with the present number, an illustration of the *Phasianus principalis* from Mr. Tegetmeier's book.

THE GUIDE TO THE "ZOO." *

The new official Guide to the Gardens of the Zoological Society is just published, and forms a very instructive little book of 112 pages, that will be read with interest by all who are fond of animals, whether they contemplate a visit to Regent's Park or not. It is illustrated with a number of most admirable photographs by Mr. Dando.

In a book of this kind, which is a marvellous production at the price, one overlooks the trivial errors that are almost

* *Official Guide to the Gardens of the Zoological Society of London*, by P. CHALMERS MITCHELL, M.A., D.Sc., F.Z.S., F.L.S., etc., Secretary to the Society. First edition. Illustrated by photographs by W. P. DANDO, F.Z.S., With plan and map. Price 6d., or ost free 7½d. from the office of the Society, 3, Hanover Square, W.

certain to appear in the first edition, but a rather serious mistake occurs on page 9, where the Long-tailed or Twelve-tailed Whydah-bird (*Chera progne*), whose portrait appears in a capital photograph, is called the Paradise Whydah (*Vidua paradisica*); but such mistakes will doubtless be put right in the next edition. We advise all our members to send for a copy.

CORRESPONDENCE, NOTES, ETC.

THE WHITE-THROATED AND RUFOUS-BREADED THICKHEADS.

SIR,—*Apropos* of the beautiful plate in your December number, you may perhaps be interested in hearing something of *Pachycephala* in captivity.

I have kept both the White-throated and Rufous-breasted Thickheads.

They very soon get on to Lark food if kept in a cage, especially when associated with a smaller bird, such as a *Malurus*, to teach them to feed.

The diet is varied with egg food, house fly maggots, and meal or wire worms.

They get very tame and will readily feed from the hand.

One met his death from this, as he followed me through the aviary porch door which I accidentally shut on him.

The song of the Rufous bird is a particularly sweet whistle, starting high and running down the scale.

Like so many of our birds, his mode of attracting the hen is by dancing. His method is different from any of the other dancers I keep as he puts his head on one side and, grasping the bough firmly, jumps violently up and down.

They are not bad birds in an aviary, and never interfere with even the tiniest of African Finches, though two cocks fought savagely.

I am hoping to get them to sit for photos, and will, if you care for them send you copies.

HELEN BOWIE.

MELBOURNE, AUSTRALIA.

[We are very much obliged to Miss Bowie for her interesting letter, and we hope that some enterprising person may bring a few of these birds to the old country and give some of us at home an opportunity of keeping *Pachycephala* in our aviaries. We should like to receive the photos which Miss Bowie so kindly offers, and, if suitable for reproduction, and funds permitting, to publish them in this Magazine.—ED.]

THE PLUMED GROUND DOVE.

SIR,—I want to ask you how to keep a pair of *Lophophaps plumifera*, which I bought the other day. I have them at present in a longish cage which I keep half covered for they seem very timid, and give them canary and millet seed. I have put sand and limestone at the bottom of the cage and a handful of hay on which they usually huddle at night. The upper part of their beak is very long and widens at the point. Never having seen other specimens of this Dove before I do not know whether this is natural or whether their beak has grown unnaturally. I have put a cuttle-fish bone in the cage on which they could rub their beak if they chose. I should like to put them in the aviary or in the bird-room where they would have more room to run about in, but want to know whether they would agree with other doves and other birds. I have several doves, the Indian Green Wing, the Diamond Dove (both these have nested and brought up young ones), the Passerine Dove, the Afra, and the Talpacoti. I have also a fine pair of *Lophotes*, but these are as yet in a cage.

Is the *plumifera* delicate, and does it require heat?

GUILIA TOMMASI.

The following reply has been sent to the Countess Baldelli.

Lophophaps is so rare in the English market, that very few aviculturists here have had any experience of it as an aviary bird. It was bred in our Zoological Gardens in 1895; but unfortunately I do not possess the volume of 'the Proceedings' for that year; so that I am unable to tell you how the birds were kept.

Being natives of the hot sandy plains of the interior, where they bask in the intense heat of the sun, nesting in a hollow scratched in the ground under the shelter of herbage, they would probably require a warm sunny aviary.

I should be afraid to associate them with any of the small doves of the New World, most of which are very pugnacious; nor do I think they would be safe with Green-winged Doves; which, though generally apathetic, will at times drive about doves of twice their own bulk.

If any doves are delicate, the Plumed Doves ought to be: if I had a pair I should keep them in an indoor aviary and turn out all other doves. I have not found any dove quarrelsome with birds of the other Orders, but finches will sometimes pluck out their feathers to line their nests with.

I can find no mention of a distorted upper mandible as a natural character in *Lophophaps*; I think if such had been the case, it would have been noted in the British Museum Catalogue.

I am very sorry to be unable to give you more definite answers to

your questions, but perhaps some other of our Members may be able to do so.

A. G. BUTLER.

[The pair of *Lophophaps plumifera* that bred at the Zoo. in 1895, nested in the grass in one of the smaller compartments of the Western Aviary. One egg was dropped some distance from the nest where it was placed by the keeper. The birds sat well and, so far as we can remember, the young were able to run when a few days old. These birds do not appear to be particularly delicate, and an outdoor aviary in Italy should suit them all the year round; growing grass appears to be absolutely necessary if they are expected to nest.—ED.]

SPARROWS NESTING IN NILE FERRY-BOATS; WINTER QUARTERS OF THE COMMON QUAIL.

Our Member Mr. Percival, writing from the Nile between Berber and Khartoum, narrates the following incident:—"When I was here before I noticed, while crossing the ferry, a cock Sparrow flying round the boat and settling on the edge now and then, but thought nothing of it at the time. Yesterday (February 26th) however, while I was waiting by the same boat, I saw a pair of Sparrows playing about close by, and then noticed the cock enter a hole in the side of the boat, and on examination found that there was a nest in the hole but could not detect whether there were eggs or not. The hole is only just above the water line, and is just under the (apologies for) rowlocks. The boat is used night and day, and constantly carrying both men and animals. The bird had all the appearance of being the ubiquitous House Sparrow of smoky old London."

Referring to statements which have been made that it is not known where the Quails (*Coturnix coturnix*) that arrive in Egypt, etc., every Autumn pass the Winter months, and to a request I have made that he should be on the look out for them, Mr. Percival now writes as follows:—"It may interest you to hear that Quail abound at El Obeid, seven days by camel south-west from Khartoum. My namesake obtained about fifty in one morning." El Obeid is the capital of Kordofan, and lies about 220 miles S.W. of Khartoum.—R. P.

ASPECT OF THE SOUTHPORT CORPORATION AVIARY.

SIR,—I find in my letter on the above subject in last month's Magazine that I inadvertently did the local branch of the Protection of Birds Society an injustice, in conveying the impression that they advocated the removal of some of the more delicate birds from the Aviary, last winter, but one, to a Conservatory.

Mrs. Walker, the Honorary local Secretary (not Mr. Walker as the printer made me say) writes calling attention to this, and I am sorry that I fell into an error, for which the local press are responsible, and which

Mrs. Walker corrects in a letter to the "Southport Visitor" of the 9th inst. It appears that the Committee themselves took the course mentioned on their own initiative, only as a kind of concession to public opinion, and not on the suggestion of the Society.

I am glad to make this correction as it seems that Mrs. Walker protested at the time against placing the birds in a Conservatory, holding, and rightly so, that the moist heat would be injurious to them.

JOHN SERGEANT.

SIR,—Mr. Sergeant has asked me to express my views as to the suitability for Foreign Birds of an aviary facing due North.

I think there can be no difference of opinion upon a question of this kind, in the minds of any experienced bird-owners: for all sun-loving birds an aviary should be so situated as to secure all the warmth and sunlight available in this inclement country: therefore, as a North aspect secures less of these requisites than any other, it must of necessity be extremely bad.

It is possible that the Corporation of Southport might have done worse, for had they provided a N.E. aspect the birds would have had (as Punch once put it) "the full benefit of a delicious N.E. wind," which would undoubtedly have encouraged the development of pulmonary disease: it will probably arrive before long, to decimate the Southport aviary, under the auspices of a North wind; but may not be quite so deadly.

Temporarily, doubtless, the great advantage of fresh air (as opposed to the closeness of a bird-shop) has a tendency to invigorate even delicate foreigners; so that, for a season even the vilest conditions of open air exercise are partly nullified by the fact that it is exercise in a pure atmosphere; but later on the more delicate must succumb.

A. G. BUTLER.

SIR,—The Southport Corporation are making an interesting experiment.

Of course all *à priori* reasoning would say it is cruel and foolish, but if they succeed in establishing that a northern exposure is the right aspect for an aviary they will establish a very remarkable fact.

F. G. DUTTON.

SHÂMA AND DYAL-BIRD.

SIR,—Do you consider a Dyal-bird difficult to keep in good health? and do you consider it as good or a better singer than a Shâma? I have one of the former on approval, and possess the latter, which I consider a most charming bird and a good songster.

I feed it on soaked ants' eggs with a little Century food, three or four mealworms a day, now and then a few cockroaches and small garden worms.

F. MOERSHELL.

The following reply has been sent to Mr. Moerschell:

You will find a Dyal quite as easy to keep as a Shâma, and it will thrive on the same food as the latter.

It is not, however, so good a singer as the Shâma, although pleasant to listen to; but very few birds of any kind equal the Shâma in power of song.

The Dyal makes an equally good pet.

F. FINN.

ORNAMENTAL, WATERFOWL.

SIR,—Would your readers kindly advise me as to the places to get reliable Waterfowl at reasonable prices, as I am desirous of collecting a nice variety for the Public Park here.

Has any one succeeded in breeding the Black-necked Swans in this country, and what is the general opinion as to the hardiness of Black Swans, as we have lost three females and one male in a short time? They appear delicate. Three females came from the Scilly Isles, and were, possibly, much in-bred. At what age do they usually breed.

J. VINER LEEDER.

The following reply has been sent to Mr. Viner Leeder:

The best places for getting Waterfowl are Messrs. Bailey's in Mount Street, London, and Mr. Castang's in Leadenhall Market. Mr. J. Hamlyn, of 221, St. George's Street East, London, often has some, as has also Mr. Jamrach, in the same street.

The Black-necked Swan has been bred in the Zoological Gardens at all events, and possibly elsewhere in England.

Black Swans are usually found quite hardy. The three females which died were very likely, as you suggest, in-bred. I cannot say at what age they breed, but should expect them to do so in their third year.

F. FINN.

THE STRIPE-THROATED SIVA.

It is worth mentioning that a specimen of this species (*Siva strigula*) was recently imported by Mr. J. Hamlyn, this being, so far as I am aware, its first appearance in the trade. Indeed, I never saw it on sale even in India, though in the Indian Museum there was a skin of an individual which had been in captivity. Mr. Hamlyn's bird, which was sold almost at once, was in absolutely perfect condition, and a most attractive creature. In action and build it reminded me of the Greater White-throat, although of course a larger bird. In general form and size it

resembled the now familiar Blue-winged Siva, but was longer and slenderer. The wings and tail in this species are marked with orange instead of blue, and the under surface is pale yellow with black transverse bars on the throat. The species inhabits the Himalayas, and is evidently as easily managed as the Blue-winged, a couple of which, also in fine condition, arrived and were sold with it.

FRANK FINN.

BREEDING CHERRY-FINCHES.

SIR,—I have a nest of Cherry-finches: the eldest of the nestlings came out of the cocoanut husk in which it was hatched on Saturday (April 2nd), the second on Sunday, and the cock bird so often goes into the husk that I do not feel quite certain that they are all out yet.

I cannot find a record of their having been bred in this country before, in any of my books. And yet it seems almost impossible that these can be the first. They have had no special attention paid them, and have nested without fuss or trouble. The hen has been ill for some time, and has not, I think, done much of the feeding, and yesterday she died. The cock is most devoted to the youngsters, who are well feathered, active, and large, and are even now using their bills, though I don't fancy they actually eat anything.

LILIAN WILLIAMS.

The following reply has been sent to Mrs. Howard Williams:

Mr. Cronkshaw bred one Cherry-finch in 1895 and Miss Husband bred three in 1898; others may have succeeded subsequently, but these two instances will suffice. I only got as far as eggs myself.

A. G. BUTLER.

WINTERING FOREIGN BIRDS OUT OF DOORS.

SIR,—I think it will interest you to hear that I have succeeded in wintering in my outdoor aviary five Green Singing-finches, four Avadavats, four Red-billed Weavers, pairs of Black-headed and White-bellied Mannikins, a hen Bronze-winged Mannikin, a pair of Silverbills, a hen Bengali, a pair of Spice-finches, a pair of Chinese Buntings, three Zebra-finch hens, a hen White and a pair of Grey Javas, a cock Orange Bishop, a pair of Ribbon-finches and about fifty Canaries. I removed the majority of the Canaries in February.

I have lost three cock Zebra-finches, a pair of Zebra Waxbills, a pair of Nonpareil Buntings, two White-bellied Mannikins, a hen Green Singing-finch, and a hen Avadavat. I cannot account for the deaths of the Zebra-finches, and wish that I had sent one at least to Mr. Gill. The Zebra Waxbills were only bought last July, three months too late, and I attribute the loss of the Nonpareils to the want of sufficient insect food.

My Red-billed Weavers moulted in December, and were very ragged for about three weeks, but are now very smart though out of colour. One of my Avadavats is still in half-colour but gradually assuming undress. With the exception of the hen White Java Sparrow and one of the Zebra-finches none have attempted to breed.

I have taken careful notice of the roosting places selected by the various birds, and have found that the Mannikins, Javas, Zebras, Silverbills, Bengali and Cutthroats roost in the wooden shelter, in bushes, etc. The Singing-finches have taken possession of two cypress trees, the Spice-finches, Avadavats, Orange-cheeks, Waxbills and Buntings sleep in the privet hedge, and the Weavers in box trees. I am satisfied that the latter are as hard as Sparrows. All are in splendid condition, with the exception of one of the Orange-cheeks which is rather ragged and has lost its tail, but appears to be healthy.

I think you will agree with me that the past winter has been a trying one. For the last fortnight we have had almost continuous Easterly and North-Easterly wind, and plenty of it, with hail, rain, snow and frosts at intervals.

R. SUGGITT.

BREEDING ZEBRA FINCHES.

SIR,—Can you tell me what sort of food I ought to give my Zebra Finches while they are breeding? Twice they have nested, and when the young birds were half grown they seemed to neglect them, consequently the young birds died. They are in an outdoor aviary, and have been left *very* quiet. They were given soft-food and millet, etc., but I feel sure there is some special food that I ought to give them to feed the young ones with. I should be much obliged if you would tell me what to do.

ADELAIDE DAWNAY.

The following reply has been sent to the Lady Adelaide Dawnay :

I have bred Zebra-finches when fed upon seed only, indeed I have young in the nest which are being fed upon this food now; but I feel sure that more satisfactory results are obtained when good soft-food containing egg and ants' egg is supplied in a separate pan. I must have bred, from first to last, over a hundred of these little birds, and I usually supply them with the same food which I prepare for my insectivorous birds:—2 parts crumb of stale household bread, 1 part powdered sweet biscuit, 1 part 'Century Food,' 1 part preserved yolk of egg; well mixed together and slightly damped.

A. G. BUTLER.

BOWER-BIRDS' PREFERENCE TO PARTICULAR COLOURS.

SIR,—It would be interesting if any of our members who have kept Bower-birds would communicate any particular preference they may have noticed in their specimens for certain colours.

The two examples now in the Zoological Society's collection which, I regret to say, are both males, certainly give the choice to blue, as, a few days back, I cut up a small quantity of bright-coloured cloth, consisting of red, pink, and two shades of blue, which I scattered round the bower in the outdoor compartment of their aviary; but, on visiting the place shortly after, I discovered that they had removed the whole of the *blue* strips to a bower they were constructing in the interior compartment of their domicile, whilst the red and pink remained outside.

Is there any connection between their preference for blue and the brilliant blue of their eyes, which is a colour seldom found in birds or mammals except as a sport or in a few domestic species?

A. E. L. BERTLING.

NOTICE: All members are asked to do their utmost to help the Society by obtaining new members. The more the membership increases, the more will the Society be able to improve its Magazine.

Members are also reminded that the stock of back volumes of the *Avicultural Magazine* is rapidly decreasing, and some numbers are getting very scarce; so that those who wish to make up sets would be wise to do so without delay.

POST MORTEM EXAMINATIONS.

RULES.

Each bird must be forwarded, as soon after death as possible, carefully packed and postage paid, direct to Mr. ARTHUR GILL, M.R.C.V.S., Veterinary Establishment, Bexley Heath, Kent, and must be accompanied by a letter containing the fullest particulars of the case. Domestic poultry, pigeons, and Canaries cannot be dealt with. If a reply by post is required a fee of 2/6 must be enclosed.

VIRGINIAN NIGHTINGALE, cock (Mrs. C. Fogg-Elliot). [Your bird died of apoplexy. You do not say on what he was fed, as this may have had something to do with the fit. If you will send full particulars of diet I shall be pleased to give you my opinion].

MASKED WEAVER (Mr. M. E. Griffiths). [Your bird died of pneumonia].

BLOOD-RUMPED PARRAKEET (Mr. F. C. Thorpe). [Your bird was much euaciated, and died of heart failure].

DIAMOND SPARROW, hen (Mrs. Connell). [Your bird died of congestion of the liver and jaundice].

TURTLE DOVE (Mr. T. H. Newman). [Your bird died of starvation owing to softening of the bones of the upper and lower mandibles. This was a most interesting case. The whole of the bones were undergoing softening. The left humerus was fractured. This is the first case of the kind I have seen. I quite think that had you administered a regular course of the syrup of phosphates in the early stages you might have saved your bird].

GREEN CARDINAL (Mr. F. Moerschell). [Your bird died of broncho-pneumonia. There were evidences on the skull of its previous injuries, but these had nothing to do with its death. Am very pleased if I have been able to assist you, and appreciate your kind remarks].

RUFOUS-TAILED GRASSFINCH (Mrs. Johnstone). [Your bird died of inflammation of the bowels. I would certainly take the precaution never to give cold water to birds in a heated aviary, but let it be at least the same temperature as the aviary. I am pleased to note you do not give egg food, as this is so frequently blamed. Flowering grass is a safe form of green food if not given in a very wet or frozen condition. Many thanks for postal order, 2/6, received. Answered by post].

SCALEY-BREADED LORIKEET (Mrs. Johnstone). [Your bird died of apoplexy, there being a large clot of extravasated blood from a ruptured blood vessel on the brain. The action of an aperient depends on the extent of the lesion. If the cerebral vessels are only congested and thus cause pressure the aperient is frequently successful, but if there has been a ruptured blood vessel and the pressure is caused by extravasated blood and this extravasation is to any great extent it usually proves fatal in spite of treatment. Your feeding is good].

SPICE-BIRD (Mr. L. W. Horton). [Inflammation of liver. Thanks for P. O. 2/6 received. Answered by post].

CORDON BLEU and **ZEBRA FINCH** (Miss Furneaux). [Apoplexy was the cause of death in both cases].

PARSON FINCH (Mr. T. N. Wilson). [This bird died of inflammation of the oviduct owing to retention of a ruptured soft-shelled egg. Am obliged for your detailed letter. You provide a good supply of shell-forming materials, but evidently not in the form appreciated by the birds. Obtain some old mortar rubbish from a demolished building,

place pieces of this about in the bushes or branches which they frequent and they may then peck it. If this does not have the desired effect, take two ounces of the pure mortar and pulverize and mix in a quart of water to be used for drinking purposes during the afternoon and evening twice or three times a week. I shall be glad to hear from you again].

INDIGO FINCH (Mr. W. Tomes). [Your bird died of fits caused by reflex nerve irritation owing to subacute inflammation of the bowels. You give no particulars as to feeding or I might have been able to suggest the cause of the diseased condition of the bowels].

PIED MYNAH (The Rev. H. Wilmot). [Your bird died of exhaustion and heart failure. It was one of those cases in which no disease of the internal organs is discernible, but there is great waste of tissue due to malassimilation of the food provided. One frequently finds the presence of parasites in birds and in fact all animals when in this extremely debilitated condition].

BLUE-FRONTED AMAZON (The Rev. R. H. Wilmot). [Death was due to pressure on the brain caused by an extensive extravasation of blood on the left side of brain. I am sorry I cannot say where you could procure Pacozzi, but perhaps some one of our members can assist you].

CORDON BLEU, hen (The Hon. M. C. Hawke). [Apoplexy caused death].

ECLECTUS PARROT, hen (Mr. C. P. Arthur). [Your bird died of acute inflammation of the bowels and liver. My advice is always—endeavour to ascertain the disease and its cause before attempting treatment. Diarrhoea is sometimes caused by some irritating material in the bowels. This indicates an aperient, by preference I use Dinneford's Fluid Magnesia. It may be caused by liver or bowel trouble, and if of an inflammatory nature aperients would probably increase the trouble. The safest remedy I have found for this form of diarrhoea (bright green) is precipitated chalk and chlorodyne. I had a pair of Eclectus Parrots that were similarly attacked, but I saved them with the above].

NIGHTINGALE (The Hon. Mary C. Hawke). [Your bird died of exhaustion, with heart failure as a consequence. I am afraid you have fed the bird too highly. You do not say what grade of Century Food you used. If No. 1, no extra egg was necessary. I have kept several Nightingales on No. 1 Century Food moistened with carrot and boiled potato alternately, and about three mealworms a day. There was extensive disease of liver, your bird being a victim to indigestion and consequent inability to assimilate the food, which caused the emaciation].

VIRGINIAN NIGHTINGALE (Mr. O. E. Cresswell). [There was no trace of poison. The bird died of apoplexy. There was an extensive blood clot on back part of brain. You do not say how she was fed: this is the most likely cause].

BEARDED REEDLING (Mr. H. L. Sich). [Inflammation of the bowels caused death, brought on probably from the feeding or chill. If you use No. 1 grade Century Food as directed you do not require hemp or maw seed. This food is of such high nutritive quality that if given as directed nothing else is necessary. I have a great opinion as to the value of it as a food for birds in captivity. Answered by post. Many thanks for postal order, 2/6].

ARTHUR GILL.

III.

NOTICES TO MEMBERS—(Continued from page ii. of cover).

CANDIDATES FOR ELECTION.

Miss MACCALL; The Rest, Church Cookham, Fleet, R. S. O., Hants.

Proposed by Dr. GREENE.

Mr. JAMES DARLING; 13, Chepstow Mansions, Chepstow Place,
Bayswater, W.

Proposed by Mr. R. I. POCOCK.

Mr. WILLIAM ERNEST TESCHEMAKER; Ringmore, Teignmouth, Devon.

Proposed by The Hon. Business Secretary.

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Seven Bicheno's Finches, 8/- each or 53/- the lot; Pintail Nonpareil hen, 8/-.

N. S. O'REILLY, 9, Royal Crescent, Ramsgate.

Cock Black-headed Gouldian Finches, aviary-bred in 1902. 10/-; pair of Grey Singing-finches 7/6. Miss M. D. SHARP, Ringwood, Hants.

Madagascar Weavers, full colour, 7/6 each; Baya Weavers, full colour, 7/6 each; Yellow-backed Whydahs, full colour, 20/- each; Cordon Bleus 7/6 pair; Orange-cheeked Waxbills 5/6; Fire Finches 6/- pair; Avadavats 3/- pair; African Singing-finches 7/6 pair; Gouldians, Black- and Red-headed, Diamond Sparrows, *Ruficauda* Finches; also several spare birds from my outdoor aviary and bird-room. The birds can be seen by appointment; all are in the best of health and feather.

H. W. BURGESS, High Street, Bushey.

Cock Ornamented Lorikeet, absolutely perfect, and extremely tame, 30/-; cock *Turnix tanki*, reared young last year, very rare, for sale or would purchase hen; cock Yellow-billed Cardinal, rare, 12/-; cock Brush Bronzewing Pigeon (*Phaps elegans*), very tame and rare, 30/-.

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WANTS.

(These are charged for at the same rate as Birds for Sale).

A hen Rock Bush Quail.

PERCY THORNILEY, Shooter's Hill, Wem, Salop.

Cock Green Cardinal.

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Pair Parrot Finches. Hens: Long-tailed Grassfinch, 3 Cordon Bleus, acclimatized.

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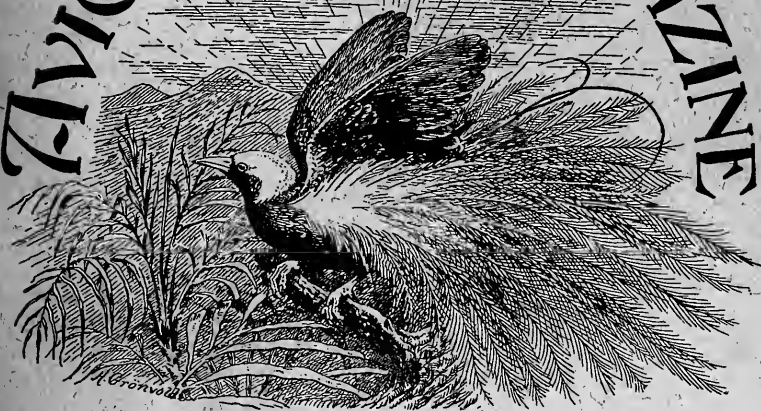
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All MSS. for publication in the Magazine, Books for Review, and Private Advertisements should be addressed to the Editor, Mr. D. SETH-SMITH, Glengarry, Canning Road, Addiscombe, Surrey.

All Queries respecting Birds (except *post mortem* cases) should be addressed to the Honorary Correspondence Secretary, Dr. A. G. BUTLER, 124, Beckenham Road, Beckenham, Kent.

All other correspondence, and Subscriptions, should be sent to the Honorary Business Secretary, Mr. T. H. NEWMAN, 20, Montpelier Square, London, S.W. Any change of address should be at once notified to him.

Advice is given, *by post*, by members of the Council to members of the Society, upon all subjects connected with Foreign and British birds. All queries are to be addressed to the Hon. Correspondence Secretary and should contain a penny stamp. Those marked "Private" will not be published.

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(Continued on page iii. of cover).

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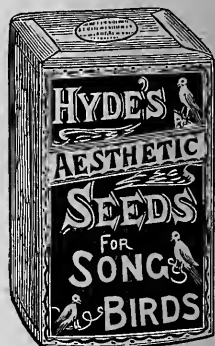
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The "BLACKPOOL GAZETTE" of Dec. 4th

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WATKIN WATKINS, B.A.CANTAB.

Member of the British Ornithologists' Union.

"Many as are the volumes which have been written on different phases and aspects of our late Laureate's works, this, we think, is the first time that a whole book has been devoted to "The Birds of Tennyson." Mr. W. Watkins, the author, is a member of the British Ornithologists' Union, and has, therefore, a scientific as well as a literary interest in the subject. And his verdict in the matter is this—that 'No poet is so satisfactory to the ornithologist [as Tennyson], for no poet had a more accurate knowledge of birds or had a happier power of describing their peculiarities.' Mr. Watkins' pages are, indeed, themselves a testimony to the acuteness as well as the frequency with which Tennyson described the 'feathered tribe.' All this, of course, is an old story to the students of the poet, but it is pleasant to find Tennyson's references to birds collected and systematised as they are in this agreeable treatise, which is, as it should be, carefully and usefully indexed. In his introduction Mr. Watkins deals with Tennyson's allusions to birds in general, and in subsequent chapters discourses successively of birds of song, birds of passage, birds of prey, birds of sport and so forth. The result should convince those who are not already convinced that as a poet of the birds Tennyson ranks with Shakespeare. Mr. Watkins, as a naturalist, of course appreciates fully the poet's stanzas on 'The Thrustle,' of which the ignorant have been accustomed to make game. He recognises the fidelity with which the bird's 'note' is reflected in such lines, homely enough, as—

'Summer is coming,
I know it, I know it, I know it.'

And he gives other instances of the poet's successful translation of birds' song into literary speech."—*The Globe*.

"Lovers and all in quest of unhackneyed forms of endearment could not do better than add to their possessions a copy of 'The Birds of Tennyson,' by Watkin Watkins. The book is a well-compiled number of extracts from the poems of Tennyson, Wordsworth, Shakespeare, Byron, Chaucer, Milton, Cowper, and other poets, in which the manners and customs of birds are introduced as similes, in dainty lines. The volume contains some excellent illustrations of birds by G. E. Lodge."—*Pall Mall Gazette*.

"Mr. Watkins, who must have spent a vast deal of time in the study of Tennyson's poetry from the natural history point of view, publishes a number of extracts, and enlarges on them in a most interesting manner. Mr. Watkins' book should prove very acceptable to Tennyson lovers."—*The Yorkshire Post*.

"'The Birds of Tennyson' should have a strong attraction, for its well-written pages are a powerful proof of the great influence exercised upon the impressionable mind of the poet by the beauties of form and the joyous songs of the feathered kingdom. There is another class of readers who should also find much pleasure in a perusal of the volume—those lovers of Tennyson as a poet who, not taking any special thought about birds, will be astonished to find how much their favourite poet knew about them and how narrowly he observed the life that moved about him. They will find, too, by the aid of Mr. Watkins' comments as an expert, how appropriately Tennyson employed his innumerable references to birds of all kinds, and especially song birds. Excellent illustrations by G. E. Lodge enhance the value of the volume."—*The Shrewsbury Chronicle*.

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BAHAMA AMAZON PARROT.
Chrysotis bahamensis

Münter & Bros. imp.

Avicultural Magazine,

BEING THE JOURNAL OF THE

AVICULTURAL SOCIETY.

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JUNE, 1904.

THE BAHAMA AMAZON PARROT.

Chrysotis bahamensis.

By J. LEWIS BONHOTE, M.A.

Several of the West Indian species of *Chrysotis* have already been figured in our Magazine, but as the majority of them are now becoming so scarce that their extinction can only be a matter of a few more years, I feel that no excuse is necessary for bringing to the notice of members a bird, which, apart from its beautiful coloration, has but little to recommend it.

This species was originally described by Dr. Bryant (Proc. Bost. Soc. Nat. Hist., Vol. VI. p. 65 1866), who recognised it as distinct from the Cuban species (*C. leucocephala*) which is its nearest ally, but owing to lack of specimens (I doubt whether there are any in Europe except those I brought over alive) naturalists have hesitated before accepting it as specially different from the Cuban Parrot of which however there can be no doubt.

With Mr. Goodchild's plate in front of us a description of this bird is unnecessary, and we need therefore only note the points in which it differs from *C. leucocephala*.

The Cuban species differs from its Bahama relative in having the belly deep crimson and showing red on every tail feather except the two central ones, whereas in the Bahama

bird the belly is entirely green occasionally showing a few isolated red feathers, and the tail is also entirely green showing red only on the two outer feathers. In addition to this the Bahama bird is slightly larger and its colours are rather brighter and more vivid.

Without going too minutely into details it may be stated that ten species of *Chrysotis* are still to be found in the West Indies, and of these four have already been figured in our Magazine, viz.: *C. bouqueti*, Vol. VII., p. 109; *C. augusta*, Vol. VIII., p. 157; *C. versicolor*, Vol. VIII., p. 275; and *C. guildingi*, N.S., Vol. II., p. 151.

The remaining species are *C. sallæi*, from San Domingo; *C. vittata*, from Porto Rica; *C. collaria* and *C. agilis*, from Jamaica; and *C. leucocephala*, from Cuba.

In Jamaica and Dominica we find two species, but all the rest of the islands contain but one, and with the exception of *augusta* and *guildingi* they are all forms and varieties, though well-marked and distinct of the white-fronted Amazon.

The Bahama Amazon seems to have a great disinclination for flying, and even when in an aviary with full use of its wings it always prefers climbing. Presumably it is for this reason that we find these birds differentiated from their allies in islands but a few miles apart and although once widely spread throughout the Bahamas it is now restricted to one, or possibly two of the islands from which it is never known to wander.

To my way of thinking there is only one satisfactory method of keeping Parrots, and that is to allow them to roam at will round a West Indian garden. Two that I brought over spent six months in that manner and were a delight to the eye as they climbed about among the thick foliage of the Bougainer Uia or sat preening themselves near the blossoms of the pink oleander, while I even learnt to appreciate (at a distance) the matutinal screams with which they welcomed the rising sun. As soon as they heard the clatter of plates denoting a meal they would solemnly stalk into the dining room, climb on to the back of a chair and worry their nearest neighbour until they

received their meal of bread, potato, or banana after which they would retire to the garden and patiently await their next meal.

This was their only food and on it they seemed to thrive. When spring came round and the sapodillas began to open they betook themselves to the sapodilla tree and wrought untold havoc amongst the fruit, throwing down what they had no use for. They were a pair and would probably have bred and seen their children's children still on that same tree (for they are by nature most stay at home and lazy) but their free career was suddenly cut short and they were transported many miles to their present home near Cambridge.

They stood the journey well and have never had a day's illness; during the winter they are kept indoors in separate cages, but in summer time they are turned into an open aviary in the hopes that they may be induced to breed, but so far without success.

They are very noisy, especially during the summer, sunrise and sunset being their most noisy periods, but unfortunately they are not over particular and may be heard within a quarter of a mile radius during any of the hours of daylight. They are not great talkers, although if time and trouble were devoted to them they might prove fairly good pupils, as they most easily pick up sounds, especially whistles, sneezing, etc., while their great *tour de force* is an imitation of a hen being caught and having its neck wrung, a common sound in the Bahamas, where poultry is always bought alive and killed just before it is required for the pot. I am glad to say that they are now wearying of this imitation, but for many months after my return to England I felt like a murderer pursued by the dying shrieks of his victim.

NOTES ON MELANISM AND ALBINISM IN BIRDS.

By A. G. BUTLER, Ph.D.

In a paper published in 1889 (*Proc. Zool. Soc.* pp. 282-7) "On a New Genus of Fossil Moths from the Eocene Freshwater Limestone of Gurnet Bay, Isle of Wight," I discussed the question as to the development of colour in Lepidopterous Insects, and the probability that (all forms presumably being originally either white or black, or a combination of these two hues), there was strong evidence to show that the first bright colours produced were blue from black, and yellow from white.

Furthermore, I argued that white indicated delicacy of constitution if acquired by reversion, a wild white primrose which I planted in my garden in the hope of multiplying this sport, having produced no seed, and having died after division of the root.

Again, in a paper published in "The Zoologist" for 1902 I made the following remarks respecting albinism in birds (p. 252):—

"There is no doubt that albinism in birds is due to constitutional weakness, and is a frequent result of close inbreeding. If a pair of Sparrows (*Passer domesticus*) takes up its quarters in one part of a building, or in the roof of an isolated cottage, the young, inbreeding for successive generations, are pretty certain to throw individuals with more or less white in the plumage. The White Dove (popularly known as 'White Java') is known to be merely the albino form of the Collared Turtle (*Turtur risorius*), and Mr. Abrahams assured me that it could always be produced by close inbreeding from the common type. It is probable that inbreeding first produced the pied Java Sparrows, from which the Chinese, by careful selection, evolved the white variety of that species. White in the plumage of birds is frequently due to old age, and increases year by year. A Chaffinch which I had for about fifteen years acquired quite white eyelids before its death, and a Cordon-bleu (*Estrilda phœnicotis*), now in my possession, began to acquire a white wing-speculum some three or four years ago; this has now become a large white

patch. A pied Chaffinch, which I once caught in the garden, became much whiter at the two succeeding moults; and a pied Blackbird sent to me a year or more ago showed an increase of white after its autumn moult; both were delicate birds, and did not live long, so that I conclude they were probably inbred."

The pied Cordon-bleu above referred to died on Jan. 7th 1903 and I sent it to the Natural History Museum: oddly enough an exactly similar example was sent to me a few days later by one of the readers of "The Feathered World." My specimen of this delicate little finch had been in my possession about seven years.

In a letter to "The Ibis" in 1902, pp. 674-6, describing an abnormal but very beautiful example of melanochroism in a Gouldian Finch, I pointed out the fact that exceptionally vigorous birds sometimes became quite black in old age, and I recorded the case of a Song-Thrush which was seventeen years old when it died, and had been in captivity sixteen years: this bird was crippled with age and quite black. Similar instances occur in the case of the Skylark. I ask the question in that letter,—“Is melanochroism in old age the result of unusual constitutional vigour, as leucochroism seems to be of constitutional weakness?” This I am now convinced must be the case.

In his article "On the Comparative Ages to which Birds live" (*Ibis* 1899, p. 25) Mr. J. H. Gurney observes—"this incipient albinism is not directly due to age, but to the artificial conditions under which all birds are placed in captivity," a conclusion to which I think all owners of tolerably large aviaries must demur, the conditions in many aviaries being only so far artificial as they eliminate the causes which are liable to shorten the lives of the more delicate birds.

In like manner, a well-known ornithologist spoke to me recently of the extraordinary effect which captivity produces in some of the Weavers when kept in aviaries, causing them to become entirely black; and he argued that, as these melanistic forms were never shot in the wild state, they must have been produced by unnatural food.

If this were the true explanation of melanism in birds, it

would be difficult to explain why all the birds of the same species when kept together and similarly fed, should not be similarly affected. It has indeed been asserted (and for some years I believed the assertion), that a Bullfinch, if fed largely upon hemp, would become black; but on my speaking to a judge at one of our large shows as to the right of a black Bullfinch to a prize in the class for rare-feathered birds, he assured me that hemp had nothing to do with the colour; and when I reflected that I had once been cautioned against giving hemp to Cardinals, because "it dulls the colouring," an assertion which I had amply disproved by invariably giving it to several species for many years, I was convinced that hemp did not necessarily affect the colour of Bullfinches.

If melanism were due to unnatural conditions apart from vigour of constitution, albinism might also be the result of artificial conditions apart from delicacy of constitution; but, in that case, it should surely have a similar effect upon all members of a species.

I think it will be admitted that, as examples of vigorous aviary birds, the Java Sparrow and the Martinican Dove rank fairly high. At the approach of the breeding-season the vitality of birds should certainly be at its highest; just as, at the moulting-season it is most heavily taxed. Now, we know that when ready to breed, male birds are very aggressive, and think nothing of plucking out one another's feathers: when these are replaced, the bird being in its fullest vigour, they should be expected to be more full of colour than if produced after an ordinary moult; is this the case? When Java Sparrows fight they attack their antagonists' heads, and the white cheeks being most conspicuous are sometimes wholly denuded of feathers: when this occurs the feathers are subsequently replaced, but are wholly black instead of white (Vide Bartlett, "Monograph of the Weaver-birds, etc.," plate II. of *Munia oryzivora*): I have a skin of this variety produced in my bird-room, and the late Mr. Abrahams assured me that he had seen other examples all produced in the same manner. In the case of the Java-Sparrow, however, if the bird survives until the next moult, the white cheeks are renewed, the reproductive energy not being then

concentrated upon one part of the plumage, but generally distributed.

I purchased two pairs of *Zenaida aurita* in May 1898; one hen of which (in spite of the incessant quarrels for which this troublesome dove is notorious) is still in good health. For several years I kept the Martinican doves with white Barbary doves in an outdoor aviary; but after the death of the second cock bird during the past winter, the solitary hen was so hunted from pillar to post that I brought her indoors, placing her in one of my covered aviaries in which were several white doves; the latter and a Necklaced Dove carried on the persecution until every feather had been removed from the lower back and rump of the *Zenaida*: these have now all been replaced by black feathers.

Melanism is not found in the species of *Pyromelana*, and one or two other Weavers, in a wild state, because they do not live to the same age as they do when watched over by experienced aviculturists: with albinism however the case is different. *Quelea russi* which is an albinistic form of *Q. quelea* is common both wild and in captivity; but then it is the product of delicacy of constitution, and may result both from inbreeding and the decline of strength due to senility.

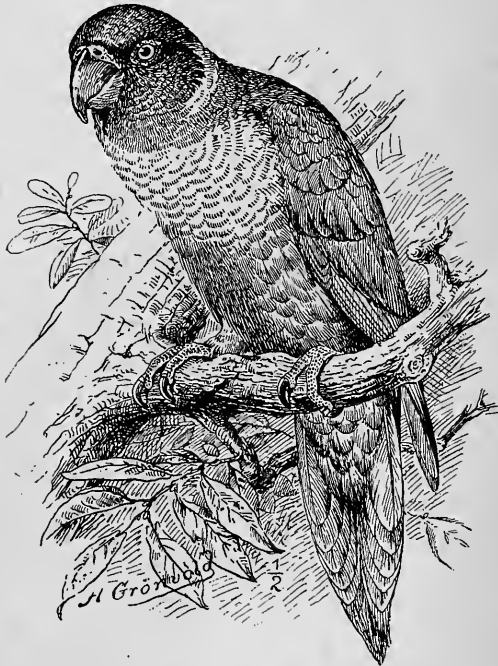
In my article in 'The Ibis' for 1897—"On changes of plumage in some of the typical Weaver-birds" pp. 359-361, I recorded the fact that a Red-billed Weaver purchased in 1888 assumed the colouring of Russ' Weaver in 1896, and died in that plumage the year following. This year I have a second and even more interesting instance in one of my aviaries, a male *Quelea quelea* having developed an intermediate plumage, in which the cheeks alone remain black, whereas a second example in the same aviary and purchased at the same time, retains the full black mask of the Red-billed Weaver. If food had anything to do with the change, both males ought to have been similarly affected.

WEBER'S LORIKEET.

Psitteuteles weberi, Büttikofer

By D. SETH-SMITH, F.Z.S.

Mention has been made in this journal, on more than one occasion, of the collection of rare birds imported privately some time ago for our member, Mrs. Johnstone, many of the species of which she obtained living representatives being entirely new to European aviculture. Amongst these there were at least three Parrots, namely Everett's Parrakeet (*Tanygnathus everetti*), the Philippine Racket-tail (*Prioniturus discurus*) and the subject of the present notice.

*Psitteuteles weberi.*

I had some considerable correspondence with Mrs. Johnstone about a green Lorikeet which was living in her aviary and formed a close friendship with a female Perfect Lorikeet (*Psitteuteles euteles*), another very rare species, though

not quite new to aviculture. The unknown bird was very carefully described to me, but I could make nothing of it, as no bird in the National Collection agreed with the description, though it was not very unlike *Trichoglossus hæmatodes*. Description having failed to enable me to identify the bird, Mrs. Johnstone went to the trouble of preparing a water-colour sketch, but even this did not help me much in my endeavours to find out what it actually was, though I was still inclined to think it might be *T. hæmatodes*, possibly immature as it possessed too little blue on the face for the adult of that species. At length, one morning the bird was discovered dead, and the body kindly forwarded to me. I immediately had the skin prepared, and took it to the British Museum, where however I found nothing whatever like it, and concluded that it must either be a species described since the *Catalogue of Birds* was published (1891), or a species entirely new to science. I may remark here that it was said to have come from Macassar, Celebes; but if so it must, I think, have reached there by human aid, as the species which I have since discovered that it belongs to, is not known to occur there.

There are one or two species mentioned in the *Hand List of Birds* that have been described since the *Catalogue* was written, and by looking up the references I soon discovered Mrs. Johnstone's bird to belong to one of these, namely *Psittuteles weberi* from Flores, a species described by Büttikofer in 1894, in Max Weber's *Zoologische Ergebnisse einer Reise in Niederländisch Ost-Indien*, and beautifully figured by Keulemans.

In the *Novitates Zoologicae* for 1898 (Vol. V. p. 43) Mr. Hartert writes of *Psittuteles weberi*: "Of this excellent species, hitherto only represented by the specimens in the Leyden Museum, Mr. Everett has sent a fine series from Endeh and from Mangarai, from the lowlands up to 4,000 feet above the sea. The specimens agree perfectly with Büttikofer's description and figure. . . . The much larger bill, the green head with bluish forehead in the old bird, the yellowish collar on the hind-neck, and the wide yellowish band across the chest distinguish *P. weberi* at a glance from *P. euteles*."

Professor Mivart, in his *Monograph of the Loriidæ* (1896),

did not recognise *P. weberi* as a distinct species, but considered it merely a variety of *P. euteles*. but this is accounted for by the fact that the British Museum, whence Dr. Mivart obtained most of the material for his book, has never contained a single specimen of the true *P. weberi*, though the two species are admirably figured in Max Weber's journal, above referred to, to which Dr. Mivart had access.

Mrs. Johnstone has very kindly supplied me with the following notes for the *Avicultural Magazine* on her living specimen of this rare and interesting bird :

"A new Lorikeet, new at least to me, came into my possession early in January of this year. It was a lively and interesting bird and reminded me much of the Blue Mountain Lorikeet, having the same lively manner and quick alert movements. The colouring was a harmony in green : blue-green head, leaf-green back, and yellow-green bar across the breast and nape of the neck. The eye was ruby colour and the beak a coral red.

"The new arrival made great advances to a hen Perfect Lorikeet (*Psitteuteles euteles*), a modest retiring little creature. She was always to be found close to him, and he always shared with her any good thing that came his way in the shape of a sweet water grape or a piece of banana. He performed the curious love dance which is peculiar to most of the Lorikeets. He very rarely screamed, in fact his note was not unpleasant unless alarmed, when it became unpleasantly shrill.

"I fed him, as I feed all my Lorikeets, on powdered biscuit (fancy lunch) moistened with sweetened boiled milk, made fresh every morning, and a piece of banana or orange or sweet water grape ; I believe he also ate a few canary seeds.

"I kept them in a cage for some time and then, thinking the exercise would be beneficial, turned them loose in a large indoor aviary. But alas! one morning I missed him, and when examining a hollow tree-trunk put to induce a pair of Black-cap Lories to nest, I found him at the bottom—dead: he had probably climbed in and been unable to get out.

"I sent him at once to Mr. Seth-Smith who pronounced

him to be Weber's Lorikeet—a very rare species—so his untimely death was most regrettable.”

The present species seems to demonstrate the absurdity of separating the Green Lorikeets (*Psitteuteles*) from the genus *Trichoglossus*, the members of which possess more or less red on the plumage, for surely colour alone should not be sufficient ground for the creation of a distinct genus! In comparing *Psitteuteles weberi* with *Trichoglossus novæ-hollandiæ*, the well-known Blue-Mountain, or Swainson's Lorikeet, we find the arrangements of the plumage to be almost identical, though of course the colours are different. On the nape we find the same yellowish band; on the breast the same large patch (red and yellow in Swainson's and greenish yellow in Weber's) the same patch on the abdomen (purple in Swainson's and dark green in Weber's). Turning to the wings we find the very same yellow patches on the inner webs of the primaries in both species. *P. weberi* has the same shaft-streaks on the head as *T. novæ-hollandiæ*, but in the former the feathers are green, and in the latter blue. Moreover the habits and actions of the one are identical with those of the other, and yet they are considered by the cabinet ornithologists to belong to different genera!

In Büttikofer's original description (which is in German), he tells us that *P. weberi* is the representative in Flores of the species in Timor known as *P. euteles* Temm., but is always easily distinguished from the latter by its distinctly larger bill, dark grass-green head (olive-yellow in *P. euteles*) with blue feathers on the forehead, the broad greenish-yellow breast-band which is quite distinct from the grass-green throat and grass-green abdomen, as well as by the colour of the underside of the tail feathers which nearly approaches olive-brown, those of *P. euteles* having a strong inclination towards olive-yellow. He points out that the immature *P. euteles* has the head also green, but brighter than that of *P. weberi*, and without the blue feathers on the forehead which characterize the latter species.

The following is a description of the adult *Psitteuteles weberi*:—Head, sides of neck and throat grass-green, each feather with a brighter green shaft-streak; the feathers on the forehead with bright blue tips; a distinct greenish-yellow collar

on the back of the neck ; the whole of the breast bright greenish-yellow, the feathers being mostly edged with green, and in the specimen before me (though this is not mentioned in Büttikofer's description) many of the feathers have distinct orange bands ; the whole of the back, upper side of wings and tail grass-green ; the quills black with their outer webs grass-green, with the exception of the outermost which is entirely black ; abdomen and under tail coverts dark grass-green, more or less mixed with yellow, especially on the sides of the abdomen ; under wing-coverts greenish yellow ; underside of wings black, with a long yellow patch on the inner web of each of the primaries, except the first, forming a broad cross-band when the wings are extended ; underside of tail olive-green, with a strong inclination towards olive-brown. Bill and irides orange-red ; feet lead colour. Total length about nine inches.

Mrs. Johnstone's specimen, from which the above description is taken, proved to be a male by dissection, but the sexes are said not to differ in plumage.

I need not, I think, apologise for having occupied so much valuable space over this very rare bird, and I would add that Mrs. Johnstone is to be heartily congratulated on having obtained a live example of the species, and kept it for some months in her aviary. I have thought it worth while to have a line drawing made to accompany this article, though colours are really necessary to do it justice.

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

Additions during the month of April 1904 :

APR.	1.	1	Boatbill (<i>Canchroma cochlearia</i>).	..	S. America.
..	5.	1	Black Swan (<i>Cygnus atratus</i>).	..	(Australia).
..	7.	1	Leadbeater's Cockatoo (<i>Cacatua leadbeateri</i>).	..	Australia.
..	7.	3	Jays (<i>Garrulus glandarius</i>).	..	British Isles.
..	11.	1	Blue-fronted Amazon (<i>Chrysotis æstiva</i>).	..	S. America.
..	11.	1	Princess of Wales' Parrakeet (<i>Polytelis alexandræ</i>).	..	Central Australia.
..	11.	1	Grey Parrot (<i>Psittacus erithacus</i>).	..	W. Africa.

APR. 12.	3	Reeves's Pheasants (<i>Phasianus reevesi</i>).	..	N. China.
„	15.	1 Burrowing-Owl (<i>Speotyto cunicularia</i>).	..	S. America.
„	18.	4 Crowned Cranes (<i>Balearica pavonina</i>).	..	W. Africa.
„	18.	1 Greater Sulphur-crested Cockatoo (<i>Cacatua galerita</i>).		Australia.
„	19.	1 Lesser Black-backed Gull (<i>Larus fuscus</i>).	..	British Isles.
„	20.	2 Antarctic Skuas (<i>Stercorarius antarcticus</i>).	..	Antarctic Seas.
„	20.	1 Hybrid Pigeon (between <i>Columba palumbus</i> and <i>Columba livia</i> , (var.)).		Bred in England.
„	20.	1 $\frac{3}{4}$ -bred Pigeon (between <i>Columba livia</i> (var.) and <i>Columba palumbus</i> , and <i>Columba livia</i> (var.)).		Bred in England.
„	20.	2 Roseate Cockatoos (<i>Cacatua roseicapilla</i>).	..	Australia.
„	20.	3 Madagascar Porphyrios (<i>Porphyrio madagascariensis</i>).		Madagascar.
„	21.	2 Yellow-vented Parrakeets (<i>Psephotus xanthorrhous</i>).		Australia.
„	22.	5 Rose-coloured Pastors (<i>Pastor roseus</i>).	..	India.
„	22.	1 Goshawk (<i>Astur palumbarius</i>).	..	Europe.
„	23.	1 Western Slender-billed Cockatoo (<i>Licmetis pastinator</i>)		W. Australia.
„	26	2 Keas (<i>Nestor notabilis</i>).	..	New Zealand.
„	28	6 White-crowned Pigeons (<i>Columba leucocephala</i>).		West Indies.
„	30	2 Large-billed Weavers (<i>Ploceus megarhynchus</i>).	..	Naina Tal.

A specimen of the Boat-billed Night-Heron, received on April 1st, is a very interesting addition to the collection, and the only one of its kind owned by the Zoological Society since 1883, before which year however some nine or ten examples had lived in the Gardens at various times. It is a native of Tropical America, and the only species of the genus *Cancroma*. "It seems," writes Professor Newton, "to be merely a Night-Heron (*Nycticorax*) with an exaggerated bill, so much widened as to suggest its English name, and its habits, so far as they are known, confirm the inference derived from its structure."

A fine example of the Alexandra or Princess of Wales' Parrakeet, presented to the Society by Mrs. St. Clair Christophers, is a very valuable addition. The species was figured in Volume V. (Sept. 1899) of this Magazine, and is also referred to elsewhere in the present issue. It is closely allied to the Barraband and Rock Pepler or Black-tailed Parrakeet, though it differs from these in the possession of a curious feature in the formation of the third primary feather, which has given rise to the adoption of the generic term *Spathopterus* (see *Parrakeets*, page 126).

The Yellow-vented Parrakeets in the above list are, of course, ordinary "Blue-bonnets," though by some extraordinary error, they are marked in the official list of additions as new to the collection. This is doubtless accounted for by the fact that this species and its near relative, the Red-vented Parrakeet (*Psephotus hæmatorrhous*) were, at one time, not recognised as distinct species, both being termed *Psephotus hæmatogaster*, a name that appears frequently in former editions of the *List of Vertebrated Animals*. Hence, when these birds were deposited under the correct name of *P. xanthorrhous* they were entered as "new to the collection," as this name did not occur in the Society's list. As every aviculturist who has studied Parrakeets knows, the Red-vented species is the rare form, and the Yellow-vented the ordinary one. So uncommon in fact is the Red-vented Blue-bonnet that our great authority on Parrots, the esteemed President of this Society, remarked, in his review of *Parrakeets*, that he did not know that such a bird existed. It is hardly likely then that all the "Blue-bonnets" that the Zoological Society has owned have belonged to this rare form.

While on this subject, I might mention that I recently examined a good series of skins of "Blue-bonnet" Parrakeets, and was struck by the way in which the two forms intergrade, it being very difficult to say to which some of the specimens belonged.

I have already pointed out in '*Parrakeets* (page 196) how greatly the Blue-bonnets differ in habits from the other species of *Psephotus*, and my strong opinion that they are worthy of generic distinction. The two forms are figured in colours in the work just referred to.

Thanks to a very genial spring, most of the Parrots in the new Flying aviary appear to be doing very well, though the vegetation is rapidly vanishing. The Quakers have made a beautiful nest of sticks, which is well worth a special journey to see, and both Leadbeaters and Rosy Cockatoos appear to be nesting in some artificial logs that have been provided for their use.

A pair of Laughing Kingfishers have a nest and the female is sitting well in the Great Aviary. D. S.-S.

CORRESPONDENCE, NOTES, ETC.

AMAZON PARROT WITH TUMOUR.

SIR,—I should be very grateful for advice as to how to treat a Blue-fronted Amazon Parrot, which appears to be in rather a bad way.

This bird is afflicted with what appears to be a tumour on the back of its head. I noticed it some months ago, and helped its owner to remove a large quantity of hardened matter which had formed a kind of core at the back of the bird's head. When this was taken away it left a hard lump with a raw surface which gradually callused over. Now this tumour or growth is much larger, and has quite spoiled the bird's appearance, as it forms a large and very unsightly lump sticking up through the feathers.

Is there any way of treating it or of removing it without killing the patient?

The bird looks rather "rough," and is a very small specimen, but I am bound to say it does not seem to suffer in any way and its appetite is good. It is rather inclined to scratch the place, but does not do so violently. It is fed on the usual Parrot mixture and a little sopped bread.

I have never seen such a growth before, but am told that Parrots are rather subject to it, so perhaps there is a recognised treatment for it among bird fanciers. I should be most grateful for any advice.

E. F. CHAWNER.

The following reply has been sent to Miss Chawner:

With regard to the swelling on the Parrot's head, it would be necessary to examine it before an opinion could be given. If the tumour is easily moved under the skin and not attached to the structures beneath, excision would undoubtedly be the correct treatment; but should it be firmly attached to the adjacent structures, its location and the structures involved would necessarily determine the advisability of an operation. Should you care to send the bird to me for examination I shall be pleased to advise you.

Your bird is evidently out of health—from your description "rather rough." Why don't you follow Dr. Butler's directions as to feeding? From experience I can strongly recommend them.

ARTHUR GILL.

RED-FACED LOVE-BIRDS.

SIR,—On the 22nd of April I received from a dealer an apparently healthy bird of this species in good bright plumage, except that the flight feathers of one wing had been cut as is customary. I directed the aviary keeper to draw the stumps and keep the bird in a cage in his house until

the new feathers had grown and the weather had become more favourable for putting it into the aviary. On the 30th April it was dead, having in the meantime lost every body feather.

On the 4th May instant I received another from the same dealer, also in good plumage and looking bright, except that it displayed a disposition to "hide its head under its wing" like the Robin in the nursery song. I determined to keep this one at home under my own eye. I drew out the stump quills from the wing, which seemed to cause very little pain, put the bird into a roomy box cage and kept it in our sitting-room, where we have kept a Grey-headed Love-bird in perfect health for a year. I fed it on white millet, spray millet, and canary seed, the last being well and freely eaten. On the morning of the 8th I noticed the bird rolling and shivering, in the afternoon it began with convulsions, in the evening it died after much struggling and beating of the wings. This is not my first experience of the kind with these birds, and I am almost afraid to buy them, though they are very attractive birds when once established.

CHAS. L. ROTHERA.

[The late Mr. Abrahams once told me that the only way to remove the stumps of the quills without injuring the bird was to take out not more than one or two at a time, repeating the operation about once a week until all were removed. Red-faced Love-birds, although they have been known to aviculturists from a very remote period, are by no means fully understood, and we should welcome a discussion of their treatment in this journal.—ED.]

BIRDS OF CUBA AND JAMAICA.

SIR,—I promised to send you a few notes on Cuban birds, but the notes on Cuban birds will be scanty this time, as I have only spent seventeen days in Cuba (Province of Santiago de Cuba), and again, Cuban birds are very scarce or perhaps shy. The only Cuban birds I have seen wild are the Cuban Nightingale—a species of Mocking Bird often kept in cages in the Cuban towns—the Nonpareil, Indigo, also a bird about the shape and size of a Java Sparrow—a fine blue-black with a white spot on throat, the Olive-throated Finch, and a bird shaped like a Sugar Bird, though double the size, plumage dark green, bill black, long and curved.

My observations on Jamaican birds are a little more extended. Up in the Blue Mountains I heard Parrots, but did not see them. I also saw a very tiny Humming Bird with a dark green back, head, and wings, and a pale yellowish green underneath. This species seems peculiar to the higher parts of Jamaica. I have also seen it in the Clarendon Hills, Santa Cruce Mountains, and Mocha Mountains, they are abundant from Catadupa down to Porus. Native Canaries are also common in the higher parts of the country: this bird is a Quilt I fancy, a bright greenish yellow, rather darker

on the wings. At May Pen, where I am living, bird life is abundant. First, Johnny Crow, which every bird from the Hummer up goes for. Riding in the Mocha Mountains one day, I saw a Loggerhead attack a Crow which was sitting on a dead tree. The attack was so strong that the Crow flew down just under the nose of my horse. After riding past a few yards, I stopped, and again the Loggerhead attacked the Crow, which never attempted to defend himself, and the last I saw as I rode on was the Crow with its head packed away under its wing and the Loggerhead charging it from every side. I am told by the blacks that it is a most difficult thing to find a Crow's nest, and not a very desirable "find," as the stench is awful. I am told the young Crows are covered with white down.

There is a pair of Humming Birds nesting in a large guango tree in front of my bungalow, and no other bird has any right in either the guango or yet a large bread fruit tree near by, the large leaves of the latter furnish a shelter for the Hummer during a tropical shower. The male bird is a beauty about the size of a Gouldian Finch, head dark green, wings brownish green, under parts a splendid metallic green, which shows up splendidly in the sun as the bird flying about sucks the scarlet hibiscus flowers. This bird has two fine long tail feathers which extend past the real tail about seven inches. The bill is bright scarlet. He is absolutely fearless, and when I am sitting on the piazza flies alongside me to search the flowers within a foot of where I am sitting. He drinks in the early morning by sipping the dew, and should we have a shower of rain he extends his wings and flutters them as he sits on a branch of a guava—a favourite tree of his—and sips the rain drops from the leaves.

The Jamaican Blackbird or Tick Bird is common in all pastures and woods. Cat-bird would be a good name for this bird as it makes a mewling noise. In the logwood bush there is a species of creeper beautifully marked with fine white and black marks all over. In the logwood bush I have seen most of the Quits, also the Green-body-bird or, as the Jamaicans call it, the Robin-red-breast (a beautiful little bird with a very peculiar call), the Old-man or Rain-bird, Banana, Blue and Orange Quits, also Grass and Bean Quits, the latter are more common in higher lands.

Ringtail, Blue and Bald-pate Pigeons are common along mountain streams, and the Ground-Dove is seen everywhere on the plains. I am told they are on the increase, having taken to nesting in trees, and so get out of the way of the Mongoose, the last-named animal, I am told, is on the decrease owing to the grass lice and ticks.

Nearly all the Jamaican birds are protected by the Government, so one has not much chance of making any close examination of the different birds, but nearly all the Jamaican birds are tame and fearless, and with a little care one gets within easy distance—a pair of field glasses also come in useful.

A pair of Beam Quits are nesting right under my sitting-room window in a thick wild fern, the nest is composed of grass and wild cotton, and contains at present one egg, pale blue with irregular brown spots—rather thickly spotted at larger end. The nest is poorly built and very fragile, in the shape of a ball with a small hole on the lower side, if the tropical rain does not wash it away it will be a wonder.

There is a large fustic tree a few yards away from my house covered with mistletoe (very much like the English plant) and flocks of Quits and Canaries visit the tree every evening for the purpose of making their supper off the insects and berries.

More next time and perhaps of Cuba, for I shall visit that island twice before I reach England again.

H. C. HESELTON.

May Pen, Jamaica, April 24th, 1904.

ALEXANDRA AND BOURKE'S PARRAKEETS.

Our Member, Mr. W. Fasey, whose collection of Parrakeets is certainly the finest private collection in Great Britain, has just had the very good fortune to secure a pair each of Alexandra or Princess of Wales' and Bourke's Parrakeets, which, through the courtesy of their owner the present writer has had the pleasure of inspecting. All four birds are very fine specimens, and it is sincerely to be hoped that they will not only live long, but will breed in Mr. Fasey's aviaries. Bourke's Parrakeet (*Neophema bourkei*) is one of the most delicately coloured and one of the rarest of the Grass-Parrakeets, the most conspicuous tints being salmon pink, pale blue, and brown. Mr. Fasey's birds are probably the only living specimens that have been seen in this country for fifteen or twenty years. There is a record of young having been hatched in an aviary in Camden Town many years ago, but they were not reared.

D. S.-S.

THE ILLUSTRATION FUND.

With the May number of the *Avicultural Magazine* was sent to every member a circular announcing that it had been decided to start the above fund as a help towards the very heavy cost of the illustrations. This appeal has been liberally responded to by a few of the Members whose names are given below; and it is hoped that a great many others will see their way to contribute something towards the fund, so that at the end of the year there may be a satisfactory balance sheet. Those who are responsible for the production of the Magazine, month by

month, are most anxious to do everything in their power to make it worthy of the important Society whose official organ it is, and they therefore, while very heartily thanking those who have already contributed, anticipate with confidence a liberal response from many other Members. Donations will be gladly received and acknowledged by the Hon. Business Secretary, Mr. T. H. Newman, 20, Montpelier Square, London, S.W.

The following donations have been received up to May 19th :—

					£	s.	d.
Miss R. Alderson	..	..	..	..	0	10	0
Mr. C. Cushney	..	..	..	..	1	1	0
Miss Dawbarn	..	..	..	..	0	3	6
The Lady Adelaide Dawnay	..	..	..	..	2	0	0
Mrs. Dennis	..	..	..	..	0	5	0
Mrs. Mortimer	..	..	..	..	0	5	0
Mr. W. H. St. Quintin	..	..	..	..	4	0	0
Mr. L. M. Seth-Smith	..	..	..	..	1	1	0
Mr. H. L. Sich	..	..	..	..	0	10	0
Mr. T. Turner	..	..	..	..	0	10	0
					£10 5 6		

POST MORTEM EXAMINATIONS.

RULES.

Each bird must be forwarded, as soon after death as possible, carefully packed and postage paid, direct to Mr. ARTHUR GILL, M.R.C.V.S., Veterinary Establishment, Bexley Heath, Kent, and must be accompanied by a letter containing the fullest particulars of the case. Domestic poultry, pigeons, and Canaries cannot be dealt with. If a reply by post is required a fee of 2/6 must be enclosed.

GREY PARROT (Mrs. Hart). Death due to inflammation of liver and bowels. Full particulars sent by post. Thanks for P.O. 2/6.]

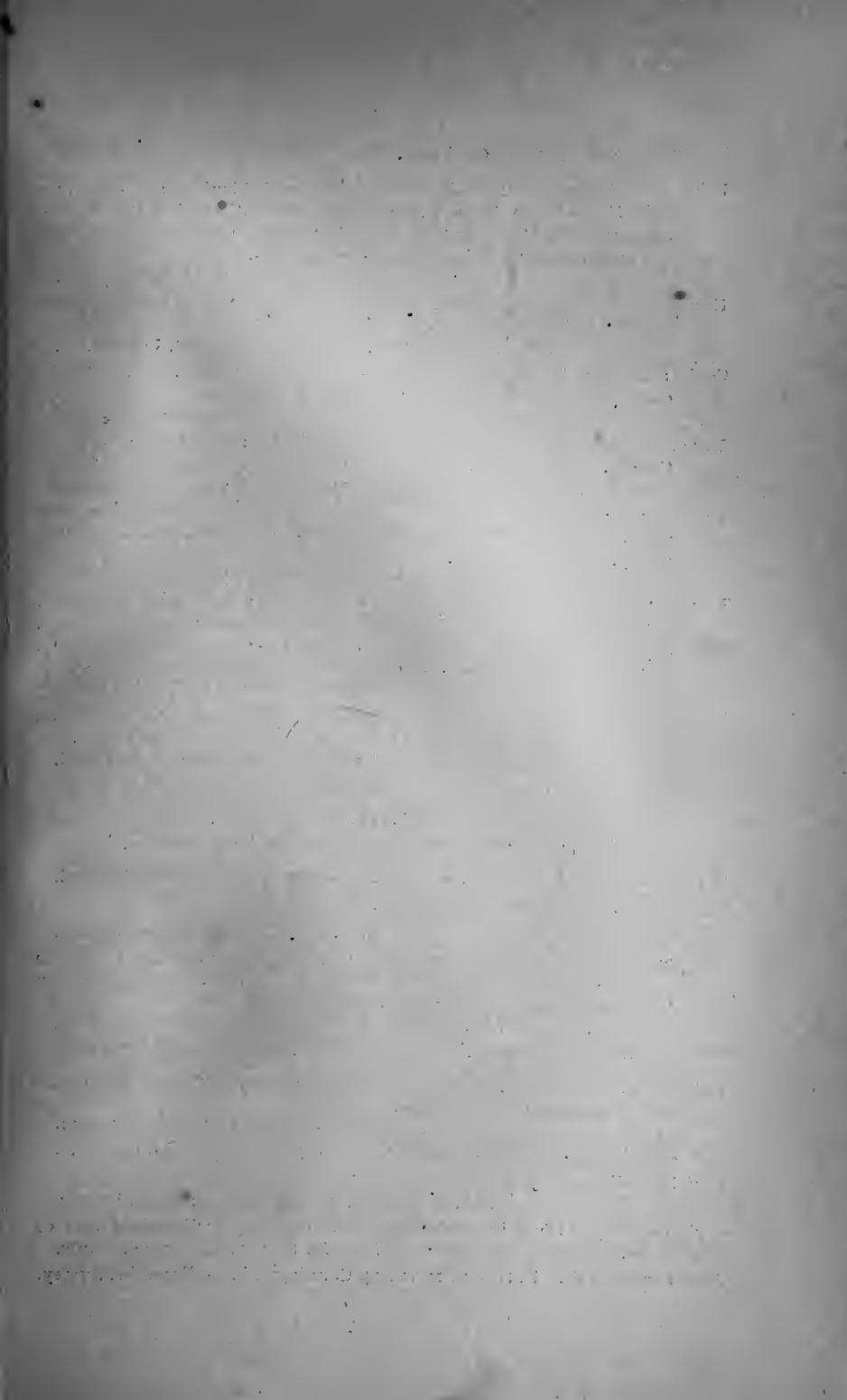
PASSERINE PARRAKEET (Mrs. Rathborne). [Bird died of apoplexy, otherwise healthy. Thanks for P.O. 2/6. Reply by post.]

GOULDIAN FINCH (Mrs. Rotch). [Died of heart failure. One of those lingering cases of inanition in which all the tissues become wasted. Reply sent by post. Thanks for P.O.]

PARROT FINCH (Mrs. Johnstone). [Your bird died of congested liver. It is difficult to ascribe the cause as you do not state temperature of bird room and general treatment. Your feeding seems correct.]

PARROT FINCH (Mrs. Johnstone). [Your bird was much emaciated. It had three small growths in the œsophagus which produced the difficulty in swallowing. The bird died of exhaustion. It was a hen.]

- TWO RED-FACED LOVE-BIRDS** (Mr. C. L. Rothera). [No. 1 was no doubt considerably debilitated by the very rapid moult. It died of acute congestion of the lungs. Either chill or gassy atmosphere would certainly produce the condition. I cannot agree with your opinion of typhoid. Neither of your birds suffered from this disease. No. 2 died of peritonitis. I have had considerable experience with young Grey Parrots and one year succeeded in rearing 27 out of 28. The one died of enteritis caused by swallowing the galvanizing material which it picked off the bars of a new cage I put it in. Red-faced Love-birds are acknowledged very delicate birds. Given equal numbers of Grey Parrots and Red-faced Love-birds I would undertake to rear from 50 to 75 per cent. more of the former than the latter if I could have the choosing of the birds. Grey Parrots when bought healthy are in my opinion fairly hardy birds.]
- ST. HELENA WAXBILL** (Mrs. E. Mellor). [Bird died of concussion of the brain. Have you any mice? They may frighten the birds and make them fly against the wires.]
- CORDON BLEU** (Miss Woods). [Bird died of concussion of the brain. It is quite possible the Cardinals are the culprits. Please read rules *re* replies by post.]
- PARSON FINCH** (Mr. Cummings). [Death was due to drowning. It was a male.]
- ZEBRA FINCH** (The Lady Adelaide Dawnay). [The symptoms described were caused by brain pressure. There was some extravasated blood on the right and posterior part of the brain.]
- BLACK-HEADED GOULDIAN Hen** (Mr. W. H. St. Quintin). [The ailment was a form of so-called "French moult." I should not have drawn the quills as it was evident the system was unable to produce sufficient feather-forming element. I should have applied an ointment of Chinosol 3 grains, Lanoline 2 drachms, and given 3 drops of Parrish's Syrup of Phosphates to $\frac{1}{2}$ -an-ounce of water to drink. Renewing same fresh daily.]
- BUDGERIGAR** (Mr. T. N. Wilson). [Bird died of concussion of the brain with pressure from extravasated blood. The beak had evidently come into contact with some hard object. The clot extended from base of beak over both eyes.]
- CROWNED CRANE** (The Hon. Gerald Lascelles). [Acute pneumonia caused death. The pinioning had nothing to do with its death. Please note Rules *re* replies by post.]
- DIAMOND SPARROW** (The Hon. Mary C. Hawke). [The bird I think had been injured at some time as there was muscular atrophy of the right breast and thigh. The immediate cause of death was congested liver.]
- PEKIN ROBIN** (Mrs. C. H. Williams). [Bird died of enteritis. It was a hen. Am afraid you could not do anything for her.]
- ZEBRA FINCH Hen** (Miss Hamilton). [She died of egg binding there being a fully formed egg in the cloaca which was much inflamed.]
- RUFIOUS-TAILED GRASSFINCH** (Mr. T. N. Wilson). [Acute jaundice caused death. On the first opportunity I will write you about others. You might send me full particulars of your aviary.]
- CORDON BLEU** (Mr. Tomes). [Your bird died of apoplexy.]
- DISEASED FEATHERS** (Mr. Roswell). [The feathers are undoubtedly abnormal. I should say it is caused by some dietetic error. If you will give full particulars of feeding, housing, etc., I will endeavour to assist you.]



IV.

NOTICES TO MEMBERS—*Continued.*

Pairs—Wells' Doves 20/-; Scaley Doves 12/6; cock Picui 5/6: 35/- the five.
 Pair Half-moon Coures, nesting, acclimatised, hen talks, 20/-.
 Meat and Vegetable Cutter (Spratt's "Bean"), suitable for aviary,
 new, good working order, cost 25/-, accept 15/-.

Miss ALDERSON, Worksop.

Hen Crested Himalayan Bunting (*Melophus melanicterus*), cage-moulted,
 healthy and in good plumage, 30/-.

Miss D. HAMILTON, 48, Bryanston Street, London, W.

Cocks: Sydney Waxbill 7/6; Ribbon-finch, aviary bred, 1/6. Would
 exchange for Cordon Bleu hens, or other foreigners.

BARBER, Wickford.

Handsome hybrid, brilliant singer, fit for exhibition: Bearded Seed-eater x
 Canary. What offer? Will anyone accept healthy very old male
 Avadavat?

Miss ASHFORD, The Birks, Bournemouth.

Healthy cock Budgerigars 3/- each; 3 hens and one cock Yellow Budgeri-
 gars 10/6 each; 2 cock Cockatiels 6/6 each, all from unheated outdoor
 aviary, last year's birds.

Mrs. WILLIAMS, 49, Okehampton Road, Exeter.

Two hen Rosellas, 2 years in England, 18/- each; pair Blue Mountains,
 anxious to nest, 50/-; hen ditto 25/-; cock Port Lincoln, acclimatised,
 25/-; adult Cockatiels 12/6 pair; Toucan 25/-; pair Toucans, nesting,
 £3; very handsome Blue-faced Barbet, cage-moulted, 25/-.

C. P. ARTHUR, Melksham, Wilts.

Very fine Red-crested Cardinal, full song, 6/6; cock Scaley Ground-Dove,
 6/-; pair White Javas, have bred young, 12/6. All outdoor aviary.

FRANK BATHE, Montgomery Road, Sheffield.

WANTS.

(These are charged for at the same rate as Birds for Sale).

Cock Blue-winged Lovebird. G. PORTER, 38, Mill Street, Bedford.

Cock Chinese Painted Quail; hen Grey Singing-finch.

H. L. SICH, East Hoathley, Sussex.

Two cock Cordon Bleus, acclimatised; one hen Golden Sparrow; one hen
 Long-tailed Grassfinch, with coral, not yellow, beak; one hen
 Golden-breasted Waxbill; one Pheasant-finch.

Mrs. WILLIAMS, Hamilton Lodge, Bickley, Kent.

Hen Bleeding-heart Pigeon.

Miss ALDERSON, Worksop.

Hen Black-headed Gouldian Finch, must be either just through the moult
 or moulting, and acclimatised.

Miss R. LYON, Harwood, Horsham.

Hen Parrot-finch.—Miss D. HAMILTON, 48, Bryanston Street, London, W.

Hen Bengali, healthy, acclimatised.

Mrs. WILLIAMS, 49, Okehampton Road, Exeter.

Cock Geoffroy's Dove in exchange for thoroughly acclimatised hen of
 same.

Miss M. SHARP, Ringwood, Hants.

Cock Parrot-finch.—D. SETH-SMITH, 14, Canning Rd., Addiscombe, Surrey.

III.

NOTICES TO MEMBERS—(Continued from page ii. of cover).

NEW MEMBERS.

- Miss MCCALL; The Rest, Church Cookham, Fleet, R. S. O., Hants.
Mr. JAMES FFOLLIOTT DARLING, F. Z. S., C. M. Royal Dublin Z. S.;
Salisbury, Rhodesia, South Africa, and Lurgan, Ireland.
Mr. WILLIAM ERNEST TESCHEMAKER, B. A.; Ringmore, Teignmouth,
Devon.

CANDIDATES FOR ELECTION.

- Mr. CHARLES W. PANTIN; Heathdene, Vanbrugh Park Road East,
Blackheath. *Proposed by Mr. F. FINN.*
Mr. J. J. HOLLINS; 7, Lowther Arcade, Harrogate.
Proposed by Mr. BOYD.
Miss MERVLEES; 16, Harley Street, Cavendish Square, London, W.
Proposed by Miss HAMILTON.
Captain ROBERT GEORGE EDWARD TWISS; Birdhill House, Birdhill,
Limerick. *And—*
Colonel SOMERSET J. BUTLER, Kilmurry, Thomastown, co. Kilkenny.
Proposed by Mr. J. FFOLLIOTT DARLING.
Miss BUBB; Ullenwood, near Cheltenham,
Proposed by the President.
The Rev. CECIL W. WILSON, Holy Trinity Clergy House, Bolsover Street,
London, W. *Proposed by the Hon. Editor.*
The Lady ELLA PEEL, Potterton Hall, Barwick-in-Elmet, Leeds.
Proposed by Dr. BUTLER.

MEMBERS' SALE AND EXCHANGE COLUMN.

The charge for private advertisements is one penny for every four words. Names and addresses of advertizers must be paid for. Each statement of price, such as 3/6, is counted as one word. Every advertisement must be prepaid, and MUST reach the EDITOR not later than the 19th of each month. The Council reserve the right of refusing any advertisement they may consider undesirable.

- Pair Crowned Cranes (*Balearica pavonina*), out of a lot lately imported from the Sudan. For sale or exchange, preferably for a pair of Common Cranes. Hon. G. LASCHELLES, Lyndhurst.
Pair Red-faced Lovebirds, privately imported, 9/6.
G. PORTER, 38, Mill Street, Bedford.
Hen Chinese Painted Quail, 10/-; 2 cock Long-tailed Grassfinches, 6/- each. All aviary bred. H. L. SICH, East Hoathley, Sussex.
Pair of Striated Finches 10/-; pair of Gutteral Finches, outdoor aviary, 12/-; 3 Bronze-winged Mannikins 4/-; White-eared Bulbul, healthy good condition, 17/6.
Mrs. WILLIAMS, Hamilton Lodge, Bickley, Kent.

(Continued on opposite page).

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THE JOURNAL OF THE AVICULTURAL SOCIETY.

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NOTE.—A new volume commences every November.

II.

All Subscriptions should be sent to the Honorary Business Secretary.

THE AVICULTURAL SOCIETY.



Persons wishing to join the AVICULTURAL SOCIETY are requested to communicate with either of the Hon. Secretaries or the Editor.

NOTICES TO MEMBERS.

The Subscription to the Avicultural Society is 10/- per annum, due on the 1st of November in each year, and is payable in advance. The entrance fee is 10/6. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

All MSS. for publication in the Magazine, Books for Review, and Private Advertisements should be addressed to the Editor, Mr. D. SETH-SMITH, Glengarry, Canning Road, Addiscombe, Surrey.

All Queries respecting Birds (except *post mortem* cases) should be addressed to the Honorary Correspondence Secretary, Dr. A. G. BUTLER, 124, Beckenham Road, Beckenham, Kent.

All other correspondence, and Subscriptions, should be sent to the Honorary Business Secretary, Mr. T. H. NEWMAN, 20, Montpelier Square, London, S.W. Any change of address should be at once notified to him.

Advice is given, *by post*, by members of the Council to members of the Society, upon all subjects connected with Foreign and British birds. All queries are to be addressed to the Hon. Correspondence Secretary and should contain a penny stamp. Those marked "Private" will not be published.

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Cases for binding Vol. I., New Series, of the Magazine (in art cloth, with gold block on side) can be obtained from the Publisher, post free and carefully packed, at 1/6 each; or the Publisher will undertake the binding of the Volume for 2/6, plus 8d. for packing and postage. All orders must be accompanied by a remittance in full; and Members are requested to state whether they want the wrappers and advertisements bound in at the end or not.

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Current Monthly Numbers 1/6 each (except in special cases, such as the Number containing the List of Members, when the Committee may increase the price), by post 1/7; for back Numbers a higher price is charged according to circumstances.

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(Continued on page iii. of cover).

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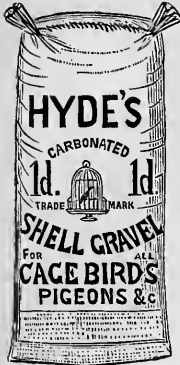
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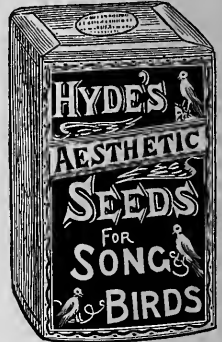
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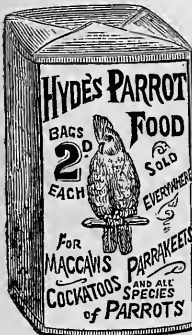


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NATURALIST,
BLACKPOOL, ENGLAND,

October 30th, 1901.

"Your Traveller was right in saying that the three nests of Parrots which I have reared were brought up on your Aesthetic Seeds, which were boiled for about half an hour, and the birds when old enough they fed upon your famous Parrot Food. Your Traveller has handled the eggs and seen the young ones progressing into maturity. More than two hundred people, from all parts of the country, have visited me in order to see the Parrots; and four gentlemen, who are Bird Naturalists, are presenting me with a Silver Cup, in commemoration of such an unprecedented accomplishment."

The "BLACKPOOL GAZETTE" of Dec. 4th

Says—"Mr. Parkinson has apparently solved the problem of Parrot-rearing, which has troubled Bird Fanciers generally throughout the country, and his skill in this direction has been recognised by the presentation of two Silver Cups at the local Bird Show."

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THE

BIRDS OF TENNYSON,

BY

WATKIN WATKINS, B.A.CANTAB.

Member of the British Ornithologists' Union.

"Many as are the volumes which have been written on different phases and aspects of our late Laureate's works, this, we think, is the first time that a whole book has been devoted to "The Birds of Tennyson." Mr. W. Watkins, the author, is a member of the British Ornithologists' Union, and has, therefore, a scientific as well as a literary interest in the subject. And his verdict in the matter is this—that 'No poet is so satisfactory to the ornithologist [as Tennyson], for no poet had a more accurate knowledge of birds or had a happier power of describing their peculiarities.' Mr. Watkins' pages are, indeed, themselves a testimony to the acuteness as well as the frequency with which Tennyson described the 'feathered tribe.' All this, of course, is an old story to the students of the poet, but it is pleasant to find Tennyson's references to birds collected and systematised as they are in this agreeable treatise, which is, as it should be, carefully and usefully indexed. In his introduction Mr. Watkins deals with Tennyson's allusions to birds in general, and in subsequent chapters discourses successively of birds of song, birds of passage, birds of prey, birds of sport and so forth. The result should convince those who are not already convinced that as a poet of the birds Tennyson ranks with Shakespeare. Mr. Watkins, as a naturalist, of course appreciates fully the poet's stanzas on 'The Thrush,' of which the ignorant have been accustomed to make game. He recognises the fidelity with which the bird's 'note' is reflected in such lines, homely enough, as—

Summer is coming, summer is coming,
I know it, I know it, I know it.'

And he gives other instances of the poet's successful translation of birds' song into literary speech."—*The Globe.*

"Lovers and all in quest of unhackneyed forms of endearment could not do better than add to their possessions a copy of 'The Birds of Tennyson,' by Watkin Watkins. The book is a well-compiled number of extracts from the poems of Tennyson, Wordsworth, Shakespeare, Byron, Chaucer, Milton, Cowper, and other poets, in which the manners and customs of birds are introduced as similes, in dainty lines. The volume contains some excellent illustrations of birds by G. E. Lodge."—*Pall Mall Gazette.*

"Mr. Watkins, who must have spent a vast deal of time in the study of Tennyson's poetry from the natural history point of view, publishes a number of extracts, and enlarges on them in a most interesting manner. Mr. Watkins' book should prove very acceptable to Tennyson lovers."—*The Yorkshire Post.*

"'The Birds of Tennyson' should have a strong attraction, for its well-written pages are a powerful proof of the great influence exercised upon the impressionable mind of the poet by the beauties of form and the joyous songs of the feathered kingdom. There is another class of readers who should also find much pleasure in a perusal of the volume—those lovers of Tennyson as a poet who, not taking any special thought about birds, will be astonished to find how much their favourite poet knew about them and how narrowly he observed the life that moved about him. They will find, too, by the aid of Mr. Watkins' comments as an expert, how appropriately Tennyson employed his innumerable references to birds of all kinds, and especially song birds. Excellent illustrations by G. E. Lodge enhance the value of the volume."—*The Shrewsbury Chronicle.*

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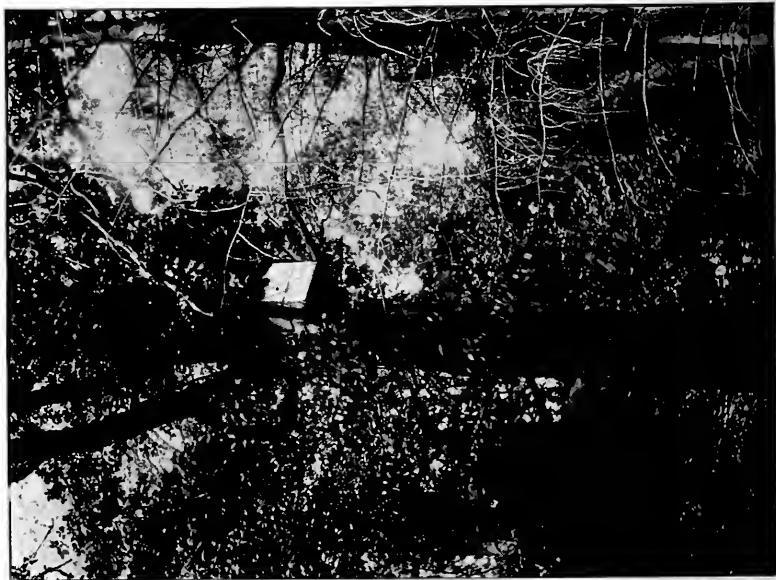


FIG. 1.

NESTING BOXES FOR WILD BIRDS.

Photos. by D. Seth-Smith.



FIG. 2.

Bale, Sons and Dantelson, Ltd.

Avicultural Magazine,

BEING THE JOURNAL OF THE
AVICULTURAL SOCIETY.

New Series.—VOL. II.—No. 9.—*All rights reserved.*

JULY, 1904.

NESTING BOXES FOR WILD BIRDS.

By E. G. B. MEADE-WALDO, F.Z.S., M.B.O.U.

A very charming, and in my opinion successful, form of aviculture, may be practised by almost anyone, provided he does not live in the heart of a town, by placing suitable and convenient nesting boxes for our hole-breeding birds, and choosing sites that are likely to be suitable to the species of bird that it is desirable to attract.

No doubt various shapes and makes of boxes are suitable, and I have seen some very nice boxes made in Germany from hollowed out birch trunks, with moveable lids and perches outside the hole; but the boxes we use, and which are almost always occupied year after year, are made by our own carpenter out of $\frac{3}{4}$ -inch oak plank for small birds, and 1-inch plank for large birds. Those for small birds are usually five to six inches square inside, eight to nine inches deep, with a lid fastened by a *leather* hinge, the lid sloping and slightly projecting over the hole, which should be near the top of the box, at the side or in front; it does not matter which. The hole should be round and $1\frac{1}{4}$ in. to $1\frac{1}{2}$ in. diameter. And I find an admirable way to attract Tits, Nuthatches, Wrynecks, etc., is to nail a piece of stout bark across the hole, so as to make the opening too small for any bird; and then the incoming tenant chips the bark away to the size required. This has the effect of keeping out House Sparrows; but boxes placed low and away from houses and out-buildings, are not much troubled by these "undesirables." Almost any

position will do, provided it is not too high up, (about 5ft. is the best height) and not fully exposed to the South-West wind, shelter from any high wind is most desirable. I find the positions near roads or walks are more attractive than very secluded sites, and that Wrynecks prefer fairly open situations, and also rather deep boxes, ten inches to one foot from the hole to the bottom of the box, which should have a little dry rotten wood in it; but if they take to a box which has already been appropriated by a Tit, they will speedily destroy the nest and clean out the box to their liking. Nuthatches will take to almost any box—even those with large holes which are suitable for Starlings—as they close the hole with mud to fit it to themselves. When they choose a box with a small hole they use mud just the same, fastening down the lid and plastering the inside round the hole and making the hole to *exactly* fit their bodies.

Some years the Great Tit breeds in the boxes almost to the exclusion of all other species, fully 80 per cent. of Tit boxes being taken by them. In other years the Blue Tit takes its place. Some Coal Tits breed in boxes every year, but the Marsh Tit rarely does so. I don't think I have had as many as twenty Marsh Tits nest in boxes in as many years: they nest in the ground or in rotten stumps. Boxes made with very wide openings, and shallow, are often taken to by Wagtails, Robins, and Flycatchers.

All boxes should be fixed *firmly* to the trunk of the tree or a wall with two nails, so that they do not twist or vibrate in any way. The occupants do not mind being looked at in the least, and you can open the lid and look at the sitting bird without the fear of it forsaking. While they are laying, all the Tits cover their eggs with nesting material, but as soon as incubation commences leave them exposed when they leave the nest. The Nuthatch however covers her eggs on all occasions. I often find my small boxes inhabited by mice, dormice, and even bats! Boxes should have the old nests taken out of them as soon as the young have flown, and, when possible, I often look at them in the early spring, to clear out anything that may have accumulated during the winter. When made of oak these boxes will last for



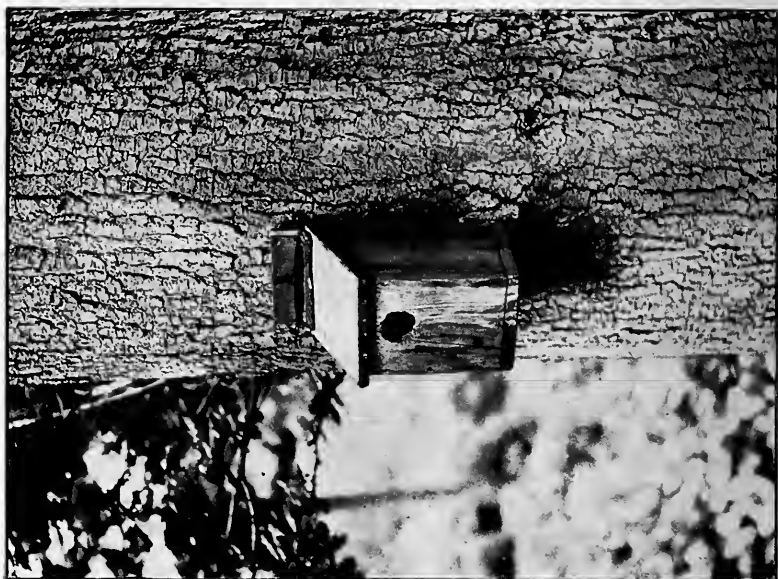


FIG. 3.

NESTING BOXES FOR WILD BIRDS.



FIG. 4.

very many years. We have some large boxes that have been up for over 30 years, and are still quite sound, and have been occupied this season.

For large birds such as Owls, Kestrels, etc., I generally have them 15 inches square, inside measurement, with double span roof, with fairly wide eaves over the sides and projecting over the hole in front. The hole should be $3\frac{1}{2}$ in. by $4\frac{1}{2}$ in., be placed in the upper part of the box, and have a ledge for the birds to perch on, such as you see in Pigeon cotes. I have no projecting eaves at the back, as that goes against the trunk of the tree. Various sites are suitable, but avoid having the hole facing into the S.W. I usually place mine from 15ft. to 25ft. up, on a stout horizontal bough, and with the back of the box against the trunk of the tree. When these boxes are first put up a few handfulls of dry rotten wood are usually placed in it, just sufficient to prevent the eggs from rolling about. This, however, is really hardly necessary, as, with the exception of Owls and Kestrels, all birds who use them convey nesting materials, and any boxes put up in the autumn are almost sure to be occupied by squirrels during the winter. Jackdaws are the greatest enemies to nests in large boxes; they fill them with sticks and are every way very objectionable; but they do not usually take to boxes when placed in woods, or when far from dwellings. Barn Owls in time will fill the box they occupy with castings up to the hole, and they want clearing out every three or four years. But boxes occupied by the Brown Owl will always be found to be quite clean, and practically no castings in them. Almost every box will be occupied by Stock Doves in late summer and autumn, with the exception of those taken by Barn Owls, who breed very late and whose young remain in the nest, often until the end of October. A few holes bored in the bottom assist in draining the boxes. The birds that usually resort to large boxes are Barn and Brown Owls, Kestrels, Stock Doves, and Jackdaws; and they are also much resorted to in winter by squirrels, young of which I have repeatedly found in them *very* early in the year.

On one occasion I found seven young stoats in one of these boxes, about 25 feet up in a beech tree! The attraction of

suitable boxes in inducing birds to breed in one's neighbourhood is quite remarkable. For even with almost unlimited natural sites nearly every box will be occupied. They give also opportunities for observing the nesting habits of hole-breeding species which could hardly be otherwise obtained.

At one time I used to provide numbers of nesting boxes for Starlings, not for their sakes however, but with the intention perhaps of relieving the Woodpeckers, whose every hole used to be appropriated by these pests as soon as completed. Now however I have given it up, as the enormous numbers of the Starling make it impossible to supply sufficient boxes, and also the *Green* Woodpecker is beginning to assert itself. I have seen two or three cases this season in which the Green Woodpecker has resented the attacks of numerous pairs of Starlings.

Owing to the kindness of our Editor, Mr. Seth-Smith, I am enabled to show some charming pictures of some boxes *in situ*. Fig. 1 represents an oak box that was put up in 1872; it is perfectly sound and good, and has been occupied by Tawny Owls on an average every other year. It has occasionally had Barn Owls in it, but when taken to by Tawny Owls the latter come so much earlier that they keep the Barn Owls out. This box is larger than those I usually put up now, being 18 inches square inside and 2 feet high, and is quite unnecessarily large, as I find the smaller boxes of 15 inches square quite as popular.

Fig. 2 shows a box occupied this year by a pair of Nuthatches, and the mud that is plastered in the hole and around it can be plainly seen in the photograph. That, too, is a very old box, about 25 years old.

Fig. 3 shows an ordinary box, in which a Coal Tit was brooding newly-hatched young ones when we photographed it.

Fig. 4 contained a brood of young Great Tits.

NOTES ON THE HABITS IN CAPTIVITY OF THE BRUSH BRONZEWING PIGEON.

Phaps elegans.

By D. SETH-SMITH, F.Z.S., M.B.O.U.

(Continued from page 214).

Of the pair of young birds hatched on or about March 18th, one died on April 15th, but the other, though rather a weak bird for some time, managed to pull through all right, and is now quite a fine bird, and just assuming the adult male plumage, at the age of about ten weeks.

The three young birds about which I have now written, and of which unfortunately one only has been reared to maturity, were hatched in the midst of very artificial surroundings, and too early in the year. I should have done wisely had I compelled the birds to wait until the warm weather and long days had arrived before commencing nesting operations, for without these it is difficult if not impossible to rear strong young birds, as I now know, even though the aviary be kept at a genial temperature.

On the 15th of April the hen Elegans was put out with the second cock, an even finer bird than the first, into a large open aviary, in which vegetation is allowed to grow in profusion, and where things are more in accordance with the natural surroundings of the Brush Bronzewing Pigeons. From this time onward matters went ahead without a hitch. On the 26th of the same month an egg was laid, and followed by another the next day, and incubation was carried out in earnest. On May 12th I discovered an egg-shell from which a young Bronzewing had evidently just emerged. Two remarkably fine young birds left the nest, strong fliers, on June 3rd, and were seen to pick up seeds for themselves a week later. These two young birds, hatched and reared under conditions closely approximating those to which they would be subject in a state of nature, could fly as strongly when just over three weeks old as the first youngster, reared under artificial conditions, could at double that age. The old birds have another nest and are sitting well.

For the history of *Phaps elegans* in its native wilds we must turn to the works of the great John Gould and Mr. A. J. Campbell. The former writes: "This species is neither so plentiful nor so widely distributed as the Common Bronzewing (*Phaps chalcoptera*); it is, however, tolerably abundant in Tasmania, the islands in Bass's Straits, and the whole of the southern portion of the Australian Continent, from the Swan River on the west to Moreton Bay on the east. In Tasmania it is very numerous, from Circular Head to the north-eastern corner of the island. It affects the most scrubby localities, giving preference to such as are low and swampy; and I have never seen it perch on the branches of trees. When flushed, it rises very quickly with a loud burring noise similar to that made by the rising of a Partridge. The shortness of its wings and tail, the extreme depth of its pectoral muscle, render its appearance more plump and round than the generality of Pigeons. It is a very difficult bird to shoot, from its inhabiting the denser part of the scrub, from which it is not easily driven. It flies but little, rarely for a greater distance than to cross a gully or top a ridge before it again abruptly descends into the scrub.

"Its food consists of seeds and berries of various kinds, particularly in Tasmania of a plant called Boobyaller.

"I believe it never migrates, but merely removes from one locality to another, as food may be more or less abundant.

"Its note, more lengthened than that of the Common Bronzewing, is a low and mournful strain, and is more often repeated towards the close of the evening than at any other time. . . . On a comparison of this species with the *Phaps chalcoptera*, the two birds will be found to differ materially in structure; the wings of the present species being shorter, and the tail comprising a smaller number of feathers, than that of the other."

It is extremely strange that so excellent an observer as Gould, who must have come across many of these birds, should state that "the sexes differ so little in colouring of their plumage that dissection is requisite to distinguish them," for not only is

it perfectly easy to distinguish the sex of the adults at a glance, but the young when in the nest are distinguishable by the brighter and deeper tints of the young male.

It is curious also that Gould should never have seen this species perch on the branches of trees, for those that have been under my observation for the last six months certainly show quite as much inclination to perch on branches as does the *Phaps chalcoptera*. Mr. Campbell writes :—

“The Bronzewing loves the open and the forest, but the Brush Bronzewing is more shy and solitary, and, as its name indicates, prefers scrubby situations and the growth about swampy places. I have seen the birds and obtained their eggs in the *Leptospermum* tracts that gird the shores of Port Philip Bay, and also in the west in the short thick scrubs of King George’s Sound. In Western Australia it is fond of placing its nest in the fork of a grass tree (*Xanthorrhœa*).

“Writing from Yorke Peninsula, South Australia, Mr. G. McDougall states he found the Bronzewing a rare bird there, while its Brush congener was common in the mallee scrub and melaleuca swamps, and further, that the kangaroo hunters rear and sell the young of the latter bird.

“In Tasmania, Mr. A. E. Brent observes, the Brush Bronze-wing usually seeks the sides of deep gullies for a nesting place, and almost in every instance the shady side of the same.

“Like the other Bronze-winged Pigeon, the Brush bird breeds almost any time of the season, but usually during the months from October to January.”

The nesting habits of *P. elegans* seem to be just the same as those of *P. chalcoptera*; the male appears to select the site for the nest, and having found what he considers a suitable place, he invites his mate to inspect it by his oft repeated “hoop, hoop, hoop.” If she will deign to inspect it he is immensely pleased, and shows his pleasure by nodding his head and flipping his wings. Should the hen approve of the site, she settles herself down on it, while the cock descends to the ground to search for

building materials in the shape of fine twigs. If the hen does not deign to come and inspect the site selected by her lord and master, the latter becomes impatient and flies to her and commences to chase her about, running and jumping after her, and every now and then stopping to bow and throw up his gorgeous wings over his back, spreading the tail, and uttering a soft grunting coo at the same time.

The Brush Bronzewing is rather smaller than its congener, the Common Bronzwing ; and after having kept both species for some time I must say that I much prefer the smaller kind, much as I love my old friend *P. chalcoptera*.

Phaps elegans is about thirteen inches in length. The male has the forehead bright chestnut ; a band of the same colour passes from the eyes to the occiput ; lores black ; crown dark grey ; the hind neck and upper back rich chestnut with a purplish tinge ; lower back and wings rich brown ; cheeks and ear-coverts whitish ; a triangular patch of dark chestnut on the throat ; lower cheeks and underparts delicate bluish-grey ; bright metallic green, copper, blue and red reflections on the wing-coverts ; under wing-coverts light chestnut.

The female differs in having all her markings duller and less distinct ; the breast and underparts dull brownish grey.

The young bird at 17 days old is dark brown above, each feather having a narrow band of whitish buff at the tip ; a white line from the base of the bill runs below the eye to the ear-coverts ; underparts dark grey, the feathers more or less tipped with whitish. At 26 days old a rich chestnut tinge has appeared on the nape, and the borders of the feathers have become more reddish. At this age the sexes can be distinguished, as the male shows more chestnut on the nape and forehead, and white on the cheeks.

At the age of nine or ten weeks the young bird moults into the adult plumage.

NOTES ON THE NESTING OF THE RED-HEADED-, OR DOMINICAN CARDINAL.

Paroaria larvata.

By ARTHUR G. BUTLER, Ph.D.

Although, according to the late Dr. Russ, this species is more generally bred in Germany than *P. cucullata*, I cannot call to mind a single instance of the rearing of a successful brood in England; yet, with a bird frequently imported, it seems improbable that it should not have been bred.

As recorded in "Foreign Finches in Captivity" I purchased my first example of *P. larvata* in February 1894, and as a second example given to me early in 1895 proved to be of the opposite sex, I turned the pair into one of my smallest aviaries and hoped for good results: in this case, as in many others, I was doomed to disappointment; for, although the pair played at building and the discovery of a broken egg-shell on the floor clearly proved that the hen was ready, no nest was ever completed.

After the death of this pair, I purchased no more Dominican Cardinals (or 'Popes' as they are sometimes called) until August 1903, when Mr. Housden brought me a very perfect pair, which I turned out into one of my bird-room aviaries. At the end of this aviary, near to the ceiling, is a sort of shelf of brushwood, the base being formed of pea-sticks resting at one extremity on a shallow square box screwed into the corner, at its centre by a stout natural branch let into the wall, and at the other extremity by nest boxes and the wire dividing this from the adjoining aviary.

In March 1904 the cock bird began to sing vociferously to the hen, and chase her about the aviary; she sang in reply, but in a lower key: shortly afterwards he began to carry about sticks and straws, pretending to put them into the shallow box supporting the end of the pea-sticks, but invariably carrying them away again.

Early in April I noticed the hen also carrying sticks about, and soon it was evident that a nest was being built in the extremely cramped situation selected by the birds. By the third

week in April the hen was sitting steadily, and I hoped that all would be well; the cock sat on a branch near the nest and vigorously attacked every other bird which approached; he even drove a Necklaced Dove paired to a hen White Barbary from their eggs, in a nest on top of the brushwood, so that the latter failed to get steadily incubated.

At the end of the month both birds suddenly deserted the nest and seemed far from well; on May 2nd the cock died, evidently from inflammation of the bowels; and on the 4th the hen followed his example: I am afraid that a consignment of unusually dusty millet received a few days before they were taken ill, must have been at the root of the trouble; but it is strange that no other birds in the aviary were affected.

On examining the nest, two eggs were found in it; owing to the cramped unnatural shape of the concavity (it could not be correctly called a cup) one egg was only so far incubated that the yolk was somewhat toughened, and burst through the shell when I tried to blow it; the other was distinctly incubated the embryo beginning to take form and veined with blood, but was not sufficiently advanced for the time; indeed it ought to have been ready to hatch, as the hen had been sitting quite a fortnight.

Both birds being in good condition, I sent them to a taxidermist to be prepared as skins; and I asked him at the same time to sex them. On the 10th they came to hand with the following instructive information—"The first Cardinal you sent was a ♀, my brother skinned it, and he says he should think the bird was laying, as the *ovaries** were very large. The last one, which I skinned, was also a female."

It is perhaps a peculiarity of female Cardinals, *when* they possess two functional ovaries, that they are endowed with all the external characters and possess all the reproductive powers of male birds; that they sing to and chase other hens, show them where to build, and indeed, so far as the aviculturist is concerned, answer the purpose equally well.† It is absolutely certain that

* These italics are mine.—A. G. B.

† The taxidermist must have mistaken the male organs for "large ovaries." If the eggs were really fertilized the bird was of course a male.—ED.

the bird described as having "large ovaries" was the only one that could have been responsible for the fertilization of the eggs, since the only other birds in the aviary were Java Sparrows, Saffron-finches, an aged Magpie Mannikin, and six Doves.

As is well known to aviculturists, the male sex in the S. American Cardinals is smaller than the female: this is especially noticeable in the Green Cardinal (*Gubernatrix cristata*) but in the Red-headed species one does not notice it much during the life of the birds; though, after death, when male and female can be compared side by side, the discrepancy is seen to be well-marked.*

In the two skins now returned to me the male is about three-fourths of an inch shorter than the female, and there is no evidence of unnatural shrinkage in this skin or of unnatural stretching in that of the female: even allowing a margin for both, the discrepancy in size could not be ignored. In the second place the beak of the male is short and broad with well arched culmen, that of the female long and distinctly narrower with culmen slightly less arched; the crown of the male is broader and shorter than in the female; and the latter shows a little more white in the wings, but I think this character is variable.

Considering that these two birds are both declared to be hens, it is a pity the young were not reared; with two mothers they should have done well!

The eggs of *P. larvata*, according to Dr. Russ, are "pale green, spotted and speckled with brownish": strictly speaking this is not correct. The ground-colour of the egg is indeed extremely pale green, it might almost be called greenish-white, but the markings are olivaceous, not brownish. Of about the same size as a Dipper's egg, but shaped more like that of the Missel-Thrush, it has the ground-tint of a Linnet's egg, the marking of a Sparrow's, but with the markings coloured as in the Dartford Warbler's egg. It vaguely resembles some eggs of the Blackbird, but the ground-tint is paler and bluer, and the markings far less red.

* Herr Wiener speaks of the female *P. cucullata* as sometimes smaller than the male: perhaps he may be right.—A. G. B.

NESTING OF THE RUFIOUS DOVE.

Leptoptila reichenbachi.

By Miss R. ALDERSON.

A short time ago I was away from home, and whilst talking to an avicultural friend he suddenly asked me, "Why do you care for those silly doves?"

My first thought, when I had somewhat recovered at hearing my favourites so described, was that *this* was exactly the opinion I constantly heard at home. My second thought, that here was a fine opportunity to defend my pets, if only I could make the most of it: possibly I might even make a convert.

Unfortunately this opinion is not a solitary one. Doves are *not* yet as popular as they should be, but those who do not keep them little know what pleasure they miss.

I am constantly told "doves *are* so silly, they have no character. I had rather have one parrot than a dozen doves." But both the doves and I have got hardened. We do not care for outside opinion, but are content to understand and enjoy each other's society.

I have always cared for these birds since the time when as small children we had one fine cock Barbary, whom (with a very vague knowledge of Latin) we named "Cooey Columbies." Like all Barbarys he got very tame, and would coo when we told him to, while I used to gaze in admiration on his soft creamy plumage, and beautiful eyes like jewels.

Poor "Cooey" came to a sad end. He was found one day murdered and mutilated, a victim to the jealousy of a pet Jackdaw. After a solemn consultation we decided that the murderer, as a punishment, was to be taken from the aviary and put into what we called the "educational cage." This structure was really large enough for him to have lived in comfortably, but before long he died, probably less from remorse than disappointment and disgust at the fact that we had totally misunderstood the motive of his act.

Years after this I read our valued member Mr. Cresswell's most interesting article on doves in "The Feathered World."

It revived the taste I had always had for these birds. I read and re-read it, wondering if I ever should be fortunate enough to possess all the doves whose portraits were depicted, but such good fortune seemed almost too much to expect.

I must start with small beginnings, so I began my small collection with a pair of British Turtle-doves, gradually getting more birds until now I have about twenty-six kinds of doves and pigeons. But there are still many more that I am ambitious to possess, and I can honestly say the more doves I have the more I want. Aviaries, however, are not expansive, and doves are—fortunately—hardy, healthy and long lived, and as I do not care to part with old favourites in exchange for new ones, I have to limit my numbers.

I got my first pair of Rufous Doves in September, 1902. To be more correct only one (the hen bird) was a Rufous, the cock is a dove I do not know the name of, but for convenience I will call it the Green Dove. These two birds, though rather alike in shape and size were quite different in colour. The true Rufous has an olive brown back and wings. The forehead is a lovely blue grey, the breast a warm rufous colour. A purple wash covers the shoulders. In size it is rather larger than a Bleedingheart but of a more upright build. The Rufous always looks as if it might have been sitting in a sunset, and caught some of the glow: its colour is so rich and warm.

The Green cock is rather larger, of a greyish colour, getting darker on the back and wings. It has a most beautiful green sheen on the neck, like the green pearl in a shell, the eyes orange, and the *inside* of the wings a lovely copper colour. So many of the doves, Rufous, Bleedingheart, Bronzewing, Violet, and others have this last peculiarity, and it is most noticeable when the bird is bathing in a shower. To-day I was watching one of my Bronzewings laid perfectly motionless on its side in the heavy rain, with one wing stretched in a splendid arch over its back, showing the lovely copper lining to perfection. Any one not used to the little ways of Doves, would have thought it dead, or very ill, but it was merely enjoying a shower bath to its heart's content.

The supposed pair of Rufous Doves, by a mistake on the journey, got right down into Warwickshire, and though sent off on Friday did not reach me until Sunday morning. They had no food nor water in their hamper, but they seemed none the worse for their long journey. Their value is 25/- to 30/- per pair.

Just about this time I had an offer of an odd dove from Brazil for 5/-. It was said to be the size and shape of a Bleeding-heart. At the time I declined it, but often (unfortunately for my purse) this fact of declining does not end the matter, and after I have refused a bird I generally only think the more about it. So it ended that I committed yet another weak extravagance, and made an exchange by which this little odd dove became mine.

I found it rather smaller than the Green cock, but in other respects exactly the same, and I believe by a strange chance I have really (by a mistake) got a true pair of a rare dove. For a long time the new comer could not fly. Though otherwise strong and healthy, I have never had a dove with its wings in such a sore state, they were one long wound from end to end of each shoulder.

In 1903 I put these three birds together in an aviary with others. Two separate nests were started at the same time, which at least showed I had one cock and two hens, but though they laid fertile eggs I never reared any young ones, nor did I succeed when previously the supposed Rufous had nested by themselves.

In November, 1903, I purchased a true pair of Rufous Doves—they were both alike, and the same as the hen bird I had got the year before. This pair I kept through the winter in another aviary, and in March they began to nest. But the eggs got broken, and the nests were failures. I then put my first hen in the same house, and the cock of the true pair quickly turned to her, forsaking his own mate, and only three or four days later the pair were nesting and sitting. The three birds agreed, but I thought it better to remove the odd hen into another aviary. Here she formed a great friendship with a Violet Dove that could not fly. It is perhaps a curious fact worth mentioning that after it became friends with the Violet Dove this Rufous always

kept to the ground, though it could fly quite well when they were first put together.

Meanwhile the pair of Rufous were sitting well, and on April 26th the first egg was hatched. In the same aviary (which is about 16ft. by 6½ft.) were also the pair of Green Doves, and a pair each of Auritas and Bronzewings. All these four pairs were nesting *at once* in perfect peace, except for a small fight at first between the cock Rufous and cock Aurita.

Both the Rufous Doves were ideal parents, and it was not until the young ones were about nine days old that the old birds left the nest even for a little time. The nest was very high up, but I managed to get a glimpse of one young bird. It looked strong and healthy and was olive brown with light brown breast, and white under parts. The forehead was light-coloured with a light whitish streak running from the beak over the eye.

On May 13th, when the young birds would be about 17 days old, they both came out of the nest and reached the ground in safety.

I have mentioned before in writing of doves that it is essential to have a wooden crib (made of 11-inch high floor boards) on the aviary floor under the nest. The crib of course filled with a good bed of straw or hay. If you neglect this simple precaution you will probably find your young birds dead, or with a broken wing on their first descent from the nest, for they are very fragile little creatures, and their small bones are soft, and if startled by the other birds they may lose their hold and fall heavily, with fatal results.

The Rufous family made such a pretty picture when I first found the young ones out, for all four were nestling together in the straw, the old birds in a state of great pride and contentment.

I find most of my doves, if good parents, have great pleasure in their young ones, and they quite seem to wish me to share it too. I am sure birds have much more sense in this way than people give them credit for.

Two days after the Rufous left the nest, the little Bronzewings followed their example, and the four small birds used to sit together on the straw, the greatest of friends.

Now that the young Rufous were out, I could see them better. Their length was about seven inches, their beaks were long and dark horn-coloured, the feet and legs dark crimson, the two outer feathers on each side of the tail tipped with white. On the wings were light brown spots or marks, (like those on a young Violet Dove); the eyes were like those of all young doves—dark, and with a very innocent look about them.

Meanwhile, the poor Green Doves had lost both their young ones when only a few days old. They used to watch the young Rufous with hungry eyes, and one day I was touched to see the Green cock timidly preening their feathers. When he found the little birds did not mind, he proceeded further, and started to feed them as well. As their own parents fed them well too it is no wonder the young Rufous thrived. "Millie," the hen Rufous, is a very loving motherly sort of bird. She preened the young Bronzewings, was devoted to her own young ones, and lavished the most affectionate caresses on her husband.

In another division of the same aviary was a case of great contrast. A poor little Necklace Dove, just about the same age as the young Rufous, but getting weaker and weaker through the inattention of its parents, who had no affection for it, and were starting to nest again. At last I could stand their neglect no longer, and seeing the young Necklace would die if left with its parents, I determined to try it in the house where the Rufous were. I put the little Necklace on the floor, but it was so weak it could hardly stand. I saw the eye of the Green cock light up with pleasure, but he evidently did not dare to come to the rescue, though he was burning to do so, for he stands rather in awe of Millie. *She* acted very promptly, and at once took the matter in her own hands—or rather beak—for she went straight up to the young Necklace and began to feed it. It was very grateful, but Millie was evidently puzzled to find it so weak after her robust young ones, and still more perplexed when it tried to nestle under her for warmth. She was very gentle with it, but she could not well stay brooding it on the aviary floor all night, so eventually I got a pair of Barbary Doves and gave the Necklace to them. They took kindly to it, but it had got too weak to recover, and died later.

After the Rufous had left the nest the Green Doves took to it (the old Rufous having chosen another site) but the young ones still came back to their old home now and then, and it was pretty to see one on each side of the sitting Green cock—that good-tempered bird seeming quite to enjoy having them with him.

I moved the young Bronzewings and Rufous when they were about five weeks old, for they began to be in the way of the old birds who were starting to nest again. The four young ones are now getting quite big birds. In the Rufous the spots on the wings have nearly disappeared, their foreheads are becoming lighter, and in one bird especially the ruddy breast is getting very decided.

The nesting of the Rufous has been one of the pleasantest experiences I have ever had in rearing young birds, and is some consolation for my many disappointments and failures. If anyone wants to learn patience under failure, let him take up either photography or bird keeping: either is a good tutor. One thing is a great encouragement to me in my love for Doves,—I feel the general taste for them is gradually but surely growing. New and rare species are being imported, old kinds are cheaper and easier to get. I can see a great change even during the few years I have been keeping doves. So I end these notes with the hope that at no distant date my favourites may be understood and appreciated as they deserve to be.

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

Additions during the month of May 1904:

MAY	2.	2	Nutmeg Fruit-Pigeons (<i>Myristicivora bicolor</i>)...	Moluccas.
"	2.	2	Nicobar Imperial Fruit-Pigeons (<i>Carpophaga insularis</i>).	Nicobar Is.
"	2.	4	Andaman Teal (<i>Nettion albiculare</i>).	Andaman Is.
"	2.	3	Andaman Banded Crakes (<i>Rallina canningi</i>)*..	"
"	2.	6	Great-billed Andaman Parrakeets (<i>Palæornis magnirostris</i>).	"
"	3.	3	Spur-winged Geese (<i>Plectropterus gambensis</i>).	W. Africa.

MAY 4.	2	Ring-tailed Pigeons (<i>Columba caribbæa</i>).	..	Jamaica.
„	5.	1 Gold-crested Myioli (<i>Ampeliceps coronatus</i>)*	..	India.
„	5.	2 Australian Cassowary (<i>Casuarinus australis</i>).	..	Australia.
„	6.	1 Orton's Guan (<i>Peuelope ortonii</i>).	..	Ecuador.
„	6.	2 Australian Barn-Owls (<i>Strix delicatula</i>).	..	Australia.
„	6.	10 Crested Pigeons (<i>Ocyphaps lophotes</i>).	..	Australia.
„	7.	1 Sarus Crane (<i>Grus antigone</i>).	..	India.
„	11.	1 Ring-necked Parrakeet (<i>Palæornis torquata</i>).	..	India.
„	11.	3 Blood-breasted Pigeons (<i>Phlogænas luzonica</i>).	..	Philippine Is.
„	12.	8 Indian Tree-Ducks (<i>Dendrocygna javanica</i>).	..	India.
„	12.	68 Undulated Grass-Parrakeets (<i>Melopsittacus undulatus</i>), 30 ♂, 38 ♀.	..	Australia.
„	12.	1 Common Quail (var.) (<i>Coturnix communis</i>) (var.).	..	Europe.
„	12.	2 Spoonbills (<i>Platalea leucorodia</i>).	..	Europe.
„	13.	1 Yellow-collared Parrakeet (<i>Platycercus semitorquatus</i>)...	..	Australia.
„	13.	2 Cayman Island Amazons (<i>Chrysotis caymanensis</i>)*	..	Cayman Is.
„	13.	1 Hybrid Pheasant (between <i>Phasianus reevesi</i> and <i>Thaunmala picta</i>) ♂.	..	(Europe).
„	14.	2 Cockateels (<i>Calopsittacus novæ-hollandiæ</i>), 2 ♀...	..	Australia.
„	14.	1 Jay (<i>Garrulus glandarius</i>).	..	British Isles.
„	14.	1 Amaduvade Finch (<i>Estrela amadava</i>).	..	India.
„	14.	1 Crimson-winged Waxbill (<i>Pytelia phœnicoptera</i>).	..	W. Africa.
„	14.	1 Banded Grass-finch (<i>Poëphila cincta</i>).	..	Queensland.
„	14.	1 Fire-tailed Finch (<i>Erythrura prasina</i>).	..	Java and Sumatra.
„	16.	1 Laughing Kingfisher (<i>Dacelo gigantea</i>).	..	Australia.
„	17.	1 Ornamental Lorikeet (<i>Trichoglossus ornatus</i>).	..	Celebes.
„	17.	1 Perfect Lorikeet (<i>Psittenteles enteles</i>).	..	Timor.
„	17.	1 Oven-bird (<i>Furnarius rufus</i>).	..	Argentina.
„	17.	2 Skylarks (<i>Alauda arvensis</i>), 2 ♂.	..	British Isles.
„	18.	1 Mountain-Witch Ground-Dove (<i>Geotrygon cristata</i>).	..	(Jamaica).
„	18.	1 Triangular Spotted Pigeon (<i>Columba guinea</i>)...	..	W. Africa.
„	18.	2 Tigrine Turtle-Doves (<i>Turtur tigrinus</i>).	..	Borneo.
„	19.	1 Rose-crested Cockatoo (<i>Cacatua moluccensis</i>).	..	Moluccas.
„	21.	2 Long-eared Owls (<i>Asio otus</i>).	..	Europe.
„	21.	1 Zebra Waxbill (<i>Estrela subflava</i>), ♀.	..	Africa.
„	24.	1 Yellow-winged Parrakeet (<i>Brologerys virescens</i>).	..	Brazil.
„	24.	1 Tui Parrakeet (<i>Brologerys tui</i>).	..	Brazil.
„	27.	1 Slender-billed Cockatoo (<i>Licmetis nasica</i>)	..	S. Australia.
„	28.	2 Herring-Gulls (<i>Larus argentatus</i>).	..	Europe.
„	30.	4 Crowned Cranes (<i>Balearica pavonina</i>).	..	W. Africa.
„	30.	2 Melodious Finches (<i>Phonipara canora</i>), ♂ ♀.	..	Mexico.

MAY 30.	1	Blue-capped Tanager (<i>Chlorophonia callophrys</i>)*	Mexico.
„	30.	1 Northern Mocking-bird (<i>Mimus polyglottus</i>). ..	Mexico.
„	30.	1 Grey Solitaire (<i>Myiadectes unicolor</i>)* ..	Mexico.
„	30.	1 Ariel Toucan (<i>Ramphastos ariel</i>). ..	Brazil.

The most notable additions are those which are starred, being new to the collection, namely, three Andaman Banded Crakes, one Gold-crested Mynah, one Blue-capped Tanager, Grey Solitaire, and two Cayman Island Parrots.

The gardens are particularly interesting to bird lovers at this time of year, as many species are nesting. Great numbers of young Pheasants of all kinds are being reared, as well as a good many Waterfowl of different kinds.

Two young Brush-Turkeys have emerged from their mound, and I am informed that when only a few hours old they could fly well, and were seen scratching up little mounds on their own account.

The Crested Screamers (*Chauna cristata*) in the old Flying Aviary have nested, probably for the first time on record in captivity. Three nests were built before the birds finally settled down to lay in the one selected, which was situated behind a large boulder. Three eggs were laid, but we have not heard of any young being hatched. Both eggs and young are said by those who have known the species in a wild state to closely resemble those of a Goose.

The Laughing Kingfishers hatched and devoured their young, as they did last year. A Weka clutch has been hatched, the parents of which belong to two distinct species, namely the Common Weka (*Ocydromus australis*) and Earl's Weka (*O. earli*). This is probably the first time that Weka Rails have hatched in this country, as they nearly always eat their eggs. Mr. Blaauw has had eggs laid by Wekas, but these have almost invariably been eaten by the birds. One that was placed under a bantam hatched, but the young bird was not reared.—D. S.-S.

* New to the Collection.

NESTING OF THE SCALY DOVE.

Scardafella squamosa.

By D. SETH-SMITH, F.Z.S.

The Scaly Dove is a bird that until recently was very rarely imported, though during the last two or three years Mr. Thorpe, of Hull, has had a good number through his hands, as well as many other rare Neotropical birds.

I received a pair of these very pretty little Doves on the 28th of August, 1903, and turned them straight out into my outdoor aviary. They showed no sign of nesting during the autumn, and spent the winter in the warmed aviary with the majority of my other birds.

Early in April they were let out with most of the other Doves into the large outdoor aviary, and immediately showed signs of nesting. They selected a site on some rough ivy stems that had been fastened up in a plum tree. The cock would sit on this and coo, a peculiar coo unlike that of any other Dove I know, and at each coo he would throw up his pretty rounded tail into a perpendicular attitude. They commenced to sit on the 19th of April and sat well, taking turns with one another, the cock doubtless sitting in the day and the hen at night like other Doves, but they are so exactly alike that it was impossible to say which was the cock or hen. On the 8th of May I noticed both birds away from the nest, and upon examination discovered two young ones, apparently about a week old, dead in the nest. The night before had been extremely cold, and possibly the sitting bird may have been frightened off during the night and the young have perished from exposure.

The pair soon set to work again however and repaired the old nest, which is exactly like that of other Doves, consisting merely of a few fine twigs. On the 12th of June I noticed three Scaly Doves sitting together on a branch, and except that the third was much smaller than the others, with a short tail and general baby-like appearance, it exactly resembled its parents.

I have not heard of any case in which the Scaly Dove has reared young before in this country, although from an article by

Dr. Greene in *Notes on Cage Birds* (Second Series, page 252) it would appear as though there were nothing exceptional about the achievement of my little pair. The writer there says: "The nestlings differ considerably from their parents in appearance, for their colour, until after the first moult, is a pale ashen-grey, very slightly marked with the scaly undulations that are so conspicuous in the old birds." This description does not at all agree with my young bird, which is slightly whiter than its parents, and the undulations perfectly distinct though not quite so broad as those of the adults. I do not know of any other Dove in which the young so very closely resemble the adults in plumage. I therefore wrote to Dr. Greene, asking him if he actually knew of a case in which young had been reared in this country, and he has kindly replied as follows: "I do not remember where I got the particulars about these Doves that appear in *Notes on Cage Birds*, but probably from Russ, whose work *Die Fremdländischen Stubenvögel*, I have not by me now. I have not kept this species and have not any personal knowledge of its having bred in this country."

As several others of our members have pairs of these Doves it is quite possible that I am not the first to have bred the species, but perhaps in any case my experience is worth putting on record.

The Scaly Doves are certainly not very peaceably inclined towards the other Doves in the aviary while they are nesting, and do their best to drive them all away; nevertheless, two or three young Diamond Doves have been reared within a few yards of the nest of the Scalies.

For the benefit of those who do not know the Scaly Dove I may say that it is about eight inches in length, of a very light brown above, and white below, with each feather edged with a crescentic bar of black, which gives it a very scaly appearance.

This species seems to be subject to melanism, for the dealer from whom I obtained my pair also sent me, on approval, a pair that were almost entirely black.

The Scaly Dove ranges from the southern border of the United States and Mexico, through Central America to Brazil.

THE ILLUSTRATION FUND.

The Council gratefully acknowledge the receipt of the following donations to the above fund :

				£	s.	d.
Rev. H. D. Astley	..	..	..	3	3	0
Mr. W. R. Fasey	..	..	..	1	0	0
Mrs. Octavia Gregory	..	..	..	0	10	0
Dr. F. Penrose	..	..	..	0	10	0
Mr. W. G. Percival	..	..	..	0	10	0
Lady Sutton	..	..	..	3	3	0
Mr. B. C. Thomasset	..	..	..	1	1	0
				<hr/>		
				£9	17	0
Amount previously acknowledged	..	..	..	10	5	6
				<hr/>		
Total received to June 22nd	..	..	..	20	2	6
				<hr/>		

THE SOCIETY'S MEDAL.

Miss Alderson has successfully reared young of the Rufous Dove (*Leptoptila reichenbachi*), and Mr. Seth-Smith has successfully bred the Brush Bronzewing Pigeon (*Phaps elegans*).

Accounts of both are now published, and it is believed that these are the first cases on record of the young of these two species having been reared in the United Kingdom. The Council propose to award a medal in each case. Should any member or reader know of a previous case he is requested to communicate immediately with the Hon. Business Secretary.

CORRESPONDENCE, NOTES, ETC.

BREEDING BUDGERIGARS.

SIR,—Could you please give me some hints on breeding Budgerigars? I have had three pairs in a large outdoor aviary for the last six months, but I do not seem able to rear any young ones. The hens frequently drop their eggs while on the perch, and get egg-bound. Is this through incorrect feeding? I give them three parts white millet and one part plain canary with a little hemp and crushed oats once a week. The seed pan in the aviary I always keep full. Is this a bad plan? and would it be better to feed with a little seed night and morning. Although this way I should find rather troublesome. The aviary is partly grassed over and I give them green stuff every other day. Is soaked bread necessary before the young are hatched?

I believe also the mice get the eggs out of the husks, as I sometimes find eggs on the floor just bitten on one side, but the yolk is still in the shell and one would be inclined to think that if mice had been the robbers they would suck the eggs quite dry.

Do you think the husks hung from the aviary ceiling a good way? They seem rather wobbly to me this way, mine at present are fastened secure to the wall and the birds seem to enjoy sitting on them.

FRANK BATHE.

The following reply has been sent to Mr. Frank Bathe :

I think the secret of your failure lies with the cocoa-nut husks. I have always noticed that the eggs and young are liable to be thrown out of these, as the actual nest is too near to the entrance hole.

I have found boxes* to answer very much better. These are made five or six inches square by seven or eight inches high, with the entrance-hole (about an inch and a quarter in diameter) near the top. The bottom is made of thick wood and slightly hollowed. The lid is made to open, and the boxes are securely fastened against the wall; *not* hung from the roof.

The only seed required is canary, and the seed-pan should be kept full of this; and when the young are hatched soaked bread is very useful. Green food, such as chickweed, groundsel, or flowering grass, should be given in abundance.

D. SETH-SMITH.

YEW TREES AND BIRDS.

SIR,—In my new aviary I have planted some *yew trees* because they give such grand cover.

I see in an old number of the *Avicultural Magazine* a note to the effect that yews are most dangerous in an aviary.

Is this fact or fancy? Of course I know they are bad for cattle.

P.S.—Chiefly foreign finches in this division of aviary.

W. E. TESCHEMAKER.

The following reply has been sent to Mr. Teschemaker :

I am afraid that there is no doubt that yews are poisonous.

I once tried one or two small yews in my aviaries, and about that time several of my little finches died: although I did not have post mortem examinations made of the bodies, it is probable that the yews were responsible for the death of some, at least, of them.

Oddly enough, the berries of yew trees are eaten with impunity by many birds.

A. G. BUTLER.

WEST INDIAN PARROTS.

SIR,—In his list of West Indian Parrots Mr. Bonhote has omitted *Chrysotis caymanensis*, of which there are two specimens now at the Zoo.

P. L. SCLATER.

* Similar to those recommended by Mr. Meade-Waldo for Tits and Nuthatches, and illustrated in this number. But for Budgerigars the bottoms must be slightly concave.—D. S.-S.

HOODED SISKIN MULES: BREEDING WITH MULES.

SIR,—I think you may be interested to hear that I have successfully paired my Hooded Siskin with a green Canary, and that they have reared three "Mista Canarias" (the fourth egg addled) which will be three weeks old on the 23rd. They are very forward and sit on perches all day and night, and one flew across the room to-day. Their markings are good but not very dark, and so far, though not green, are not the orange of the *Mista canaria* from Teneriffe, though I have no doubt they will get so after their first moult. I also paired the *Mista canaria*, but his hen sat badly and has only reared one bird out of four eggs. This bird seems smaller than the others and has quite as much orange tinge as the true *Mista canarias*. Both hens are beginning to prepare fresh nests.

M. NORMAN.

Chelsea, May 21st.

SIR,—Our member Miss M. Norman, having been successful in breeding with the offspring of the Hooded Siskin and Canary (the *Mista canaria*), I asked her to allow her letter to be published in the Magazine.

Although fertile hybrids are common enough in the orders *Anseres*, *Columbæ*, and *Gallinæ*, they seem to be rarer in the *Passeres*, and particularly in the family *Fringillidæ*; it is therefore important to put every case on record.

A. G. BUTLER.

REARING DIPPERS AND HOODED CROWS.

SIR,—Can you kindly give me any advice as to rearing young Water Ouzels? I am trying to bring up two.

I have a nest full of Hooded Crows reared. I gave them egg (shell and all), raw meat and milk, and sometimes a lump of pap to stop their mouths when I was feeding the dogs or other birds.

J. FOLLIOTT DARLING.

The following reply has been sent to Mr. folliott Darling:

The late Lord Lilford tried very hard to rear Dippers, but was never able to keep them alive for more than three months. Three or four years ago Dr. Sharpe had a similar experience.

If the Water Ouzel is to be reared, I should think "Century Food," given very moist until the young were able to pick, would be most likely to succeed. I should add small earthworms, and, if you can get them, caddis-worms.

The failure to rear many insectivorous birds is undoubtedly due to their being fed upon minced raw beef, which brings on diarrhoea and apopleptic fits.

I believe it is possible to rear any of the Crows upon soaked bread and minced raw beef; but, with the typical insectivorous birds, it is another matter altogether.

A. G. BUTLER.

RED-FACED LOVEBIRDS.

SIR,—As you ask for a discussion *re* treatment of Red-faced Lovebirds, I will begin by stating that my first lot came to me in 1880. My first

investment in foreign birds was in the previous year, when I had bought one dozen cock Budgerigars from the late Anton Jamrach. The Lovebirds were turned into a large cage with the Australian Parrakeets. A cocoanut shell was hanging on the centre post, and within a very short time one of the hens took possession and began to lay eggs, which the mischievous Budgerigars quickly threw out. I knew nothing of bird-life then, and have so often regretted that I did not clear out the Budgerigars, and leave a clear field for the Lovebirds, for I did not know it was rare for them to breed.

I cannot understand why the wing feathers are cut, as the birds are far quieter than Budgerigars which arrived un mutilated. Their quill stumps I have never attempted to pull out, but let the birds moult them as best they can. For food they get Indian spray and Italian white millet—chickweed and sprays of grass in seed and flower. They are fond of gnawing cuttle-fish bone, but although grit is kept at the bottom of the cage, I have never during all these years seen one on the floor pecking it.

I lately had a pair from one of our members who said he fed them on canary seed and rice, and had never lost any. Although I have tried mine with oats, grass seeds, and canary in separate dishes, they will not touch them, but remain true to the millet.

With me the average life in cages is six years, but I kept one hen for nearly ten years.

W. T. CATLEUGH.

APPRECIATION OF KINDNESS BY ROBINS.

SIR,—I should like to relate a short incident showing that birds do really understand and appreciate our care for them. We had a pair of wild Robins in the garden that I had tamed. The hen fed from our hands, the cock who was slyer would only feed at our feet. If he was alone he gave a peculiar whistle which quickly brought the hen, however far out of sight she might be, and with her coming he grew bolder.

These Robins had a family in a nest made in an old tin in a wood below our garden, and I used to try and help the hardworking little pair by feeding them to support their young ones.

I generally fed them by the aviary door, and one very wet day the old birds came to me bringing their eldest son and heir to show me; a poor little dragged baby Robin, wet through, but all the same a great source of joy to his parents. I think it was on the next day I went down to the aviary, and as I drew near the door I saw the Robins in a state of great excitement. They had brought no less than seven baby Robins for me to see, such sweet little things with spotted breasts and the blackest of black eyes. The parents were in a state of great pride and excitement, trying to keep the young ones in a circle near the door, a somewhat difficult matter. You may imagine how I appreciated my Robins' trust in me, and I felt I could not do less than throw the babies a handful of mealworms to celebrate such an auspicious occasion and wish them good luck.

ROSIE ALDERSON.

POST MORTEM EXAMINATIONS.

- Cock VIRGINIAN NIGHTINGALE, three PECTORAL FINCHES (Capt. G. Rice). [Your bird has been ailing for some time. The right lung was consolidated as a result of pneumonia. The bird was much emaciated. The immediate cause of death being acute pneumonia of left lung. Two of the Pectoral-finches died of enteritis. There was an inordinate amount of grit in the gizzard and intestines which might have caused this. You should be cautious in the use of grit to new birds, as if this has been withheld for a considerable time, birds are apt to overdo themselves if given freely. The third bird was too decomposed to make a satisfactory examination. Both birds reported on were hens].
- CALIFORNIAN QUAIL, hen (Rev. R. H. Wilmot). [She died of a fractured skull; probably frightened, and in flying up struck her head].
- ROCK PEBBLER, hen (Mrs. Noble). [The bird died of dysentery and exhaustion].
- MASKED FIRE-FINCH (Mr. Roberts). [Your bird died of concussion of the brain].
- Young BUDGERIGAR (Rev. R. H. Wilmot). [This is undoubtedly one of those cases in which for some cause (usually weakness from overbreeding) the parents become inattentive to their young. The young come out of the nest before they are strong enough owing to being hungry. The dirty nest is another proof of the parents' inattention. The young birds which die in the nest should be removed at once, as, if decomposition commences, the vitiated atmosphere causes sickness and sometimes death amongst the others. Do not let them raise more than four for the next nest or two. Your bird died of starvation].
- ORANGE-CHEEKED WAXBILL (The Hon. Lilla de Yarburgh Bateson). [Your bird died of jaundice. It was a hen].
- SISKIN (The Hon. Lilla de Yarburgh Bateson). [Pneumonia was the cause of death].
- BLOODRUMP PARRAKEET (Mr. Moerschell). [Your bird died of enteritis (inflammation of the bowels). I should be almost inclined to blame the green food. Should you have another case of diarrhœa, separate the bird and give three drops of Browne's chlorodyne and 15 grains of prepared chalk in one ounce of drinking-water, and stop the green food].
- BULLFINCH, hen (Mr. Moerschell). [Concussion of brain was the cause of death. Possibly the Cockatiels are responsible for it].
- Two GOLDEN PHEASANT chicks (Miss Appleton). [Both chicks died of enteritis. Try the following food: Good ants' eggs, fresh if possible; egg-yolk, hard boiled, put through a potato-masher; Osborne biscuit, and plenty of finely-chopped fresh grass. As soon as large enough, give in addition to above, but separate, canary and millet seed. I have found no difficulty whatever in successfully rearing Pheasants and Quail on this diet. I have great confidence in the grass for the staple food. Many thanks for P. O. for 2/6].

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- Healthy pair Chinese Painted Quails. R. H. WILMOT, Poulton, Fairford.

III.

NOTICES TO MEMBERS—(Continued from page ii. of cover).

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THE JOURNAL OF THE AVICULTURAL SOCIETY.

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(Continued on page iii. of cover).

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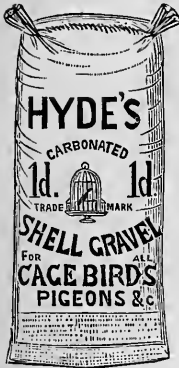
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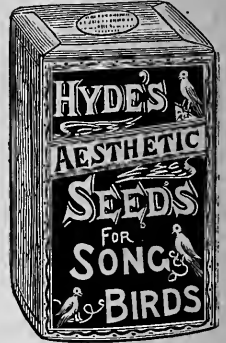
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BY
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Member of the British Ornithologists' Union.

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"Many as are the volumes which have been written on different phases and aspects of our late Laureate's works, this, we think, is the first time that a whole book has been devoted to "The Birds of Tennyson." Mr. W. Watkins, the author, is a member of the British Ornithologists' Union, and has, therefore, a scientific as well as a literary interest in the subject. And his verdict in the matter is this—that 'No poet is so satisfactory to the ornithologist [as Tennyson], for no poet had a more accurate knowledge of birds or had a happier power of describing their peculiarities.' Mr. Watkins' pages are, indeed, themselves a testimony to the acuteness as well as the frequency with which Tennyson described the 'feathered tribe.' All this, of course, is an old story to the students of the poet, but it is pleasant to find Tennyson's references to birds collected and systematised as they are in this agreeable treatise, which is, as it should be, carefully and usefully indexed. In his introduction Mr. Watkins deals with Tennyson's allusions to birds in general, and in subsequent chapters discourses successively of birds of song, birds of passage, birds of prey, birds of sport and so forth. The result should convince those who are not already convinced that as a poet of the birds Tennyson ranks with Shakespeare. Mr. Watkins, as a naturalist, of course appreciates fully the poet's stanzas on 'The Thrush,' of which the ignorant have been accustomed to make game. He recognises the fidelity with which the bird's 'note' is reflected in such lines, homely enough, as—

Summer is coming, summer is coming,  
I know it, I know it, I know it.'

And he gives other instances of the poet's successful translation of birds' song into literary speech."—*The Globe*.

~~~~~

"Lovers and all in quest of unhackneyed forms of endearment could not do better than add to their possessions a copy of 'The Birds of Tennyson,' by Watkin Watkins. The book is a well-compiled number of extracts from the poems of Tennyson, Wordsworth, Shakespeare, Byron, Chaucer, Milton, Cowper, and other poets, in which the manners and customs of birds are introduced as similes, in dainty lines. The volume contains some excellent illustrations of birds by G. E. Lodge."—*Pall Mall Gazette*.

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"Mr. Watkins, who must have spent a vast deal of time in the study of Tennyson's poetry from the natural history point of view, publishes a number of extracts, and enlarges on them in a most interesting manner. Mr. Watkins' book should prove very acceptable to Tennyson lovers."—*The Yorkshire Post*.

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"'The Birds of Tennyson' should have a strong attraction, for its well-written pages are a powerful proof of the great influence exercised upon the impressionable mind of the poet by the beauties of form and the joyous songs of the feathered kingdom. There is another class of readers who should also find much pleasure in a perusal of the volume—those lovers of Tennyson as a poet who, not taking any special thought about birds, will be astonished to find how much their favourite poet knew about them and how narrowly he observed the life that moved about him. They will find, too, by the aid of Mr. Watkins' comments as an expert, how appropriately Tennyson employed his innumerable references to birds of all kinds, and especially song birds. Excellent illustrations by G. E. Lodge enhance the value of the volume."—*The Shrewsbury Chronicle*.

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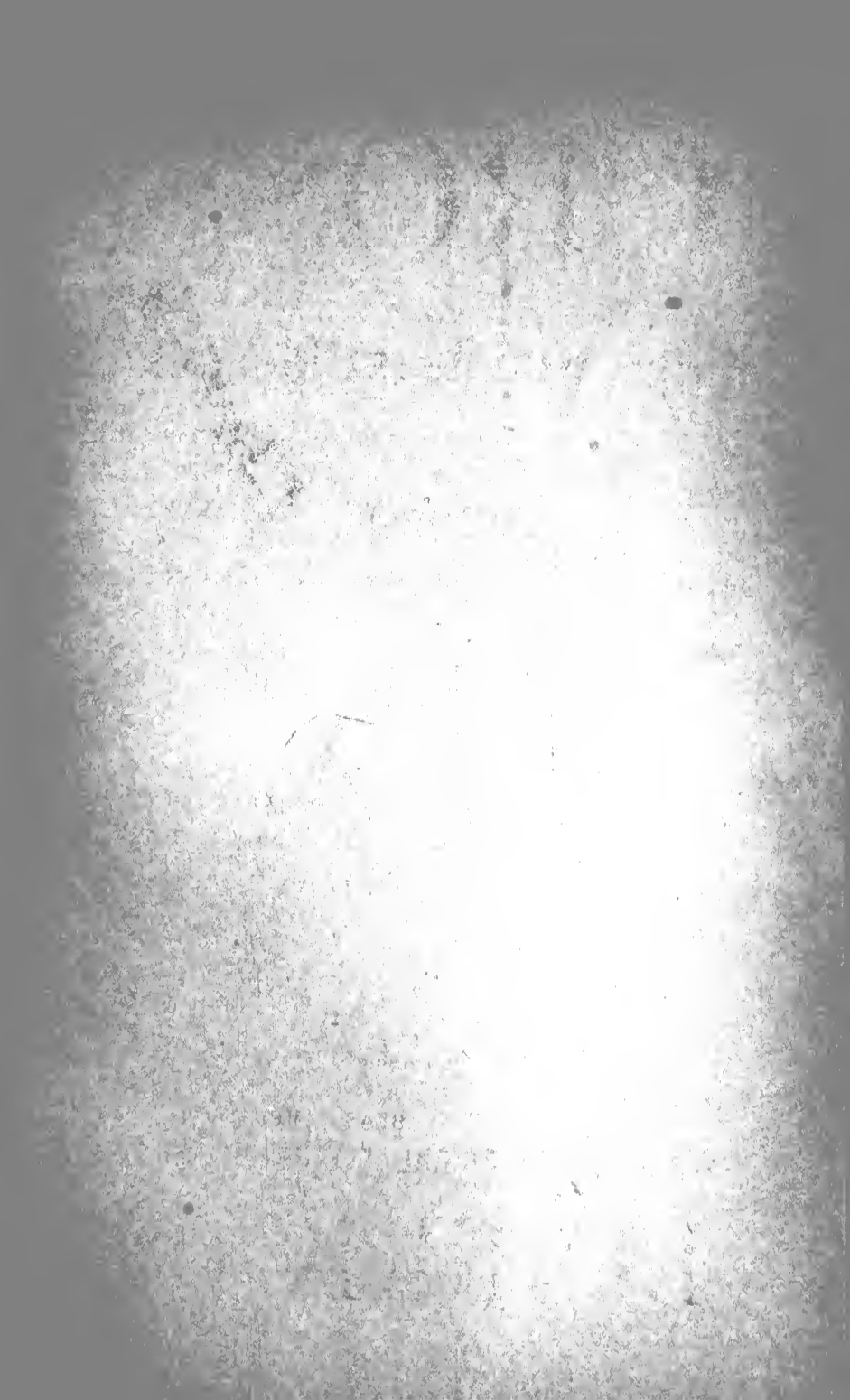
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CRYPTURUS TAITAUPA, ♀ et juv.

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AUGUST, 1904.

ON THE BREEDING IN CAPTIVITY OF THE TATAUPA TINAMOU (*Crypturus tataupa*).

By D. SETH-SMITH, F.Z.S., M.B.O.U.

The remarkable groups of Neotropical birds known as Tinamous, and constituting the order *Crypturi* are not very well known to aviculturists, with the exception of perhaps one or two of the commoner species, but they are such interesting and curious birds as to be very well worth special attention. In size they vary from that of a good-sized fowl to that of a Quail, and, though somewhat resembling the *Gallinæ* in outward appearance, they are, in reality, widely different from these, both in structure and habits, and show considerable affinity to the *Ratitæ*.

The common Rufous Tinamou, *Rhynchotus rufescens*, is well known to most people, and has frequently bred in this country, both in aviaries and at liberty, and the late Mr. Bartlett has written an interesting paper on the nesting of this species at the Zoo. (*Proc. Zool. Soc.*, 1868, p. 115). The smaller species are however little known in this country, being very seldom imported; and I was very glad, last autumn, to have an opportunity of securing a pair of the small *Crypturus tataupa*, from Brazil, a species about the size of a Californian Quail, which has not been represented in the London Zoological Gardens for more than twenty years.

Azara wrote an interesting account of the habits of the Tataupa as long ago as 1805: He tells us that it is often found

near to Country houses, and inhabits woods and thickets. It lays four eggs, of a beautiful purple colour, and the sitting bird, when disturbed, flutters from the nest feigning lameness. He kept some alive in a room where they carefully hid themselves, only appearing to feed when no one was near. The notes are louder and more brilliant than those of any of their congeners. It commences its song with one high note, followed by an interval of eight seconds; then the note is repeated at shorter intervals, and then runs into a trill, followed by a sound like *chororo*, repeated several times. He put three adults in a cage during October and November, which sang; and in September the following year they laid three eggs, but did not sit. When sitting close, he tells us, it tips the body forward, pressing its breast on the ground, and raising the rump higher than the back, opening the feathers and spreading them into a semi-circle over the back, so that when looked at from behind nothing is visible but a fan of feathers.

Mr. W. A. Forbes, writing on "Eleven weeks in North-Eastern Brazil" (*Ibis*, 1881, p. 369), remarks: "The 'Nambu,' as the present species of Tinamou is called, is not at all an uncommon bird in the neighbourhood of Macuca and Garanhuns, where I several times heard its cry, and once or twice flushed it. Its flight, however, though strong, is short, the bird soon settling again; and the country is so thickly covered with brushwood and undergrowth that it is, in consequence, no easy matter to shoot these birds, at least without the aid of dogs. Sometimes they are startled and shot by Brazilian sportsmen; but more usually they are snared. At Garanhuns I bought a lot of seventeen Nambus and a pair of the next species* for 2500 reis (about five shillings)—not a bad bargain perhaps!—from a boy who had just caught them; and afterwards I had many more offered me for sale."

My pair of Tataupas arrived on the 28th of August, 1903, and were put into a fairly large aviary, consisting of a wooden shed, some twelve feet square, with a grassed run of slightly larger dimensions. The pair took kindly to their new home;

* *C. noctivagus*.

and when they had been with me but a week or so I began to find eggs dropped about in various places. On October the 4th I noticed a nest behind a box in a corner of the covered part of the aviary. It consisted simply of straw, feathers and leaves, the only materials available at the time: and when discovered it contained two eggs. On the morning of the 6th another egg had been laid, and incubation, performed by the *male* only, was commenced. The female, from the moment her mate commenced to sit, took no further interest in the proceedings, in fact if she happened to approach the nest the male would make a rush at her with open mouth, so that she fled in terror. The male sat well, very seldom leaving the nest, and when he did so, he always covered the eggs most carefully with some of the rubbish with which the nest was composed. On the 28th of October, quite early in the morning, I noticed the male off the nest, and upon examination discovered that all three eggs had hatched. Two young birds were crouching in the nest, but the third was just outside, and quite dead, having apparently left too soon, and got chilled. The other two were covered by their parent in the nest the whole of that day, and did not leave until the morning of the 29th. The beginning of November was cold, and I thought it best to transfer the brood to a warmed aviary. They fed well on small earthworms, gentles, and seed, but although for the first week they seemed to do well it was quite the wrong time of year to rear young Tinamous, and on the seventh day after their birth one was found dead. The other lived until a fortnight old, but for some days before it died it was decidedly weakly.

The birds were then separated for the winter, as they were most anxious to nest again. When separated they constantly called to one another, or rather the female called and the male answered. The call of the female, which is much more often heard than that of the male, consists of two or three loud notes uttered at intervals of one or two seconds, followed by a rapid succession of similar notes which run into a trill. The male's call consists of three notes only, similar to, but somewhat less full than those of the female.

Early in April the two birds were put together again and immediately commenced nesting operations. Before laying

commenced the female would spend a good deal of her time at the nest, and a low clucking sound was audible. On April 19th the male commenced to sit on four eggs, and, as before, the female took no further interest in the proceedings. She was heard to call frequently however, and when the male came off the nest to feed, would run to him and display before him in the most curious attitudes, with the obvious intention of persuading him to mate with her again. The only effect, however, was to make him furiously angry, and to display his anger by chasing her round the aviary with open bill.

On May the 10th three chicks emerged from the four eggs, the fourth containing a dead young bird. On the morning of the 11th the male left the nest with two chicks, the third being left dead just outside the nest. The two chicks were remarkably strong little birds, and I have no doubt that both would have been successfully reared to maturity had not one of them, to my inexpressible disgust, been accidentally killed, having run behind a moveable wire run, and been crushed. The brood was therefore reduced to a single individual. This bird progressed splendidly. He was fed on soft food (preserved yolk of egg, fine crissel, preserved ants' eggs and bread crumbs) to which was added finely chopped chickweed; small earth-worms, which he was very fond of, and the most important item of all—live gentles, which are kept in dry sand for two or three days before being used.

At the age of ten days this chick could fly so well and strongly that there was a danger of his injuring himself against the wire-netting at the top of the aviary, and I thought it advisable to catch him and clip the feathers of one wing. This effectually prevented his flying for a week or so, but, as the feathers when cut were not nearly full grown, he was able to fly well again after a short time, and the operation had to be repeated.

By June the 6th another clutch of five eggs had been laid, and the male commenced to sit; and on the 25th I noticed egg shells outside the nest, although the male bird was sitting tight. He left the nest the following morning with three chicks,

and a fourth was left dead in the nest, the fifth egg being addled. All three are well and strong as I write (July 8th).

I cannot understand why the fourth chick was dead, for it was right in the nest, and could not therefore have died of cold. Neither could it have died of starvation, although the chicks remain in the nest some twenty-four hours after hatching, for upon dissection its stomach was found to contain a large amount of yolk, which would have lasted it for several hours.

The young Tataupas are most charming little creatures, and the very accurate and beautiful drawing which Mr. Grönvold has prepared to accompany this paper shows the chick just emerged from the shell, and is, I think, the only illustration that has ever been made of the young of this species, and I much doubt if the adult has been accurately figured either.

These chicks are extraordinarily strong on the leg from the time they leave the nest, and are much more independent than the young of the true gallinaceous birds, the parent seeming to take but a casual interest in his chicks. Should a human being approach close to the brood, he will not attempt to defend his charges, but will immediately run away, while they will take shelter in any scrap of herbage or rubbish that may be near. As far as I have been able to observe, the chicks are absolutely silent. A faint note is frequently heard, which I at first thought was uttered by the chick, but I am now convinced that it is the parent's call-note to summon them to him.

A peculiar habit of the adult bird when alarmed was noted by Azara, as mentioned above, namely, that of squatting on the breast and throwing the tail into the air, forming the under tail-coverts into a screen to hide the rest of the body, and thereby

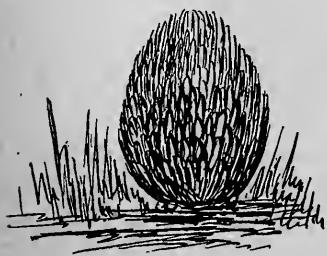


FIG. 1.

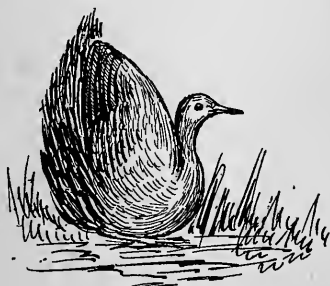


FIG. 2.

becoming practically invisible amongst herbage or undergrowth of any kind. (Figs. 1 and 2). It is very interesting to see this habit, developed to a moderate extent, in the very young chicks; they too will, when they suspect danger, squat and throw up their little tails, almost always arranging that the latter shall be towards the object of their alarm.

A detailed description of the chick is unnecessary with the plate before us, * but I may remark that in the plumage of the chicks, as in that of the adult birds, there is an abundance of the substance known as "powder down," and the living chick, although exactly corresponding to the drawing in other respects, looks considerably greyer, on account of the presence of this substance. At the age of twelve days the chick is full-winged and can fly strongly: The wing coverts are tipped with buffish spots. A few days later the dark grey feathers begin to appear through the down on the body, but the feathers on the head are the last to appear, as in most birds.

The single bird reared from the brood hatched on May the 10th, although still rather small (July 8th) is the image of the adults, with the exception that it is still slightly spotted on the wings, the feathers on the flanks and vent are less distinctly margined with whitish, and the bill is lead-colour.

A description of the adult is quite unnecessary with the plate before us (which certainly does very great credit both to the artist and the chromo-lithographers). The living bird however does not show quite such a contrast between the grey of the head and neck and the brown of the back as shown in the plate, on account of the presence of the "powder down," before referred to, which gives the whole bird a lead-coloured appearance. The bird figured is the female, a slightly larger bird than the male, and with a redder bill. She is not supposed to be taking any notice of the chick, which, as above stated, looks to its male parent entirely for support.

The egg-shell in the plate exactly represents the shell after hatching; but it is then a dull thing as compared with the

* The nestling of only a few days old was described by Dr. Allen in the *Bulletin of the American Museum of Natural History* (Vol. v. p. 151).—D. S.-S.

newly laid egg, which is an extremely beautiful object, as in fact are the eggs of all the Tinamous. I think I can best describe the colour as rich pink chocolate, and the surface is highly glossed. The colour of the egg unfortunately fades rapidly after it is blown. I was shown one in the British Museum, the only one in the collection, which was a dirty whitish colour—about as different to the thing when fresh as it could possibly be. The egg measures 1.65" \times 1.25".

At page 104 of the present volume I called attention to a most interesting account of the breeding in captivity of the Martineta Tinamou (*Calopezas elegans*), by M. Delaurier, in France, and I pointed out that he had proved this species to be polyandrous, and I suggested that most probably all of the Tinamous, and perhaps some other orders, would prove to be so when their habits were known. Although the evidence that I am able to bring forward is perhaps not quite as conclusive as it might be, I have at any rate quite satisfied myself that polyandry is the order of things with the species now under consideration, and I think there can be little doubt that it obtains in *all* of the Tinamous. I have stated above that the female, very soon after having laid a clutch of eggs, showed unmistakably that she wished to pair again with the original male, no other being then at hand. On the first of June I heard from Mr. Thorpe, of Hull (the dealer from whom I obtained the original pair of Tataupas) that he was expecting a single bird of this species in a few days, and, being anxious to prove whether this species were polyandrous, I asked him to send it on immediately it arrived, hoping that it would prove to be a male. It arrived on the 6th, and I could tell from its small size that it was certainly a male, so I was glad to keep it.

At this time the original male had just commenced to sit on a batch of six eggs; nevertheless the female, when introduced to the new male, showed unmistakable signs that she was not only willing but anxious to nest again immediately. But having been so very recently imported, and being unusually timid, the new bird would have nothing whatever to do with her; but she made a nest behind some logs of wood and laid

two eggs within three weeks of the arrival of the new bird. I think there can be no doubt whatever that had the new bird been an acclimatised specimen and in breeding condition, the female would have laid a full clutch, which he would have incubated.

RAVENS BREEDING IN CAPTIVITY.

By W. H. ST. QUINTIN, F.Z.S., M.B.O.U.

I picked up two Ravens in London in the spring of last year, and thought that I had secured a pair, for the birds differed considerably in size, and were excellent friends. However a third was given to me a few months later by a kind friend, and though a large Raven, I at once saw from its slender build and much less powerful beak, that this, at any rate, was a hen. Soon after Christmas, it was evident that the new comer had made a match of it with the big bird, and the lesser one had such an uncomfortable time that I was glad to find it a peaceful home elsewhere.

In the middle of February I fixed up a large flat basket in a corner of the aviary where the Ravens were kept, and broke up a faggot of larch twigs upon it, and supplied freely birds, cockroaches, wool, and moss (the latter was never used). The birds soon made up their minds, and set to work with such energy that in a week the nest was ready for eggs.

We kept the aviary very quiet, as the female Raven was rather timid, and I cannot give the exact date at which incubation commenced. I had to leave home on March 10th, and the Raven was sitting close. As events turned out I believe that I made a mistake in leaving instructions that, as soon as young were heard, the parents were to be plentifully supplied with small young rabbits, which the keepers, at the time, were killing down; and such Sparrows and mice as could be procured, and I regret now that their diet was not varied with a more nourishing régime, for I believe that the young in consequence suffered.

Anyhow, when I returned in the third week of April I found that, though there were two noisy, and otherwise

vigorous, young in the nest, there was something uncanny about their beaks, as they showed above the edge of the nest, and they were plainly quite deformed. A week later I inspected the nest and found one young bird recently dead, with its leg tightly twisted up in the wool which lined the nest. Its beak was both twisted awry and the upper mandible projected unnaturally over the lower one; the living nestling being also disfigured in the same way. Moreover, if closely examined one sees that the toes of one foot do not spread as they should. However these defects do not affect the young bird's spirits, and only the other day I watched him playing with a flat piece of bone, burying it, and immediately digging it up, as if dissatisfied with the security of his treasure, in the quaint way common to the Crow family. But the poor bird cannot tear up tough food, and we have to be careful to supply pieces that he can manage. The parents, rather grudgingly, still (mid. July) feed him, and should they cease to do this, I am afraid he may have some difficulty in picking up a living. I attribute these defects to insufficient nourishment (quality not quantity) when the nestlings were growing, as it seems to me to be a form of "rickets." Anyhow I shall take care that, if I am lucky enough to have another Ravens' nest next spring, there shall be plenty of more substantial food at hand. It did not occur to me at the time, but as a falconer I ought to have remembered that, though rabbit flesh is a good change of food, especially in hot weather, Hawks cannot work hard upon it; and if fed too freely upon this meat, will rapidly lose condition and stamina.

In conclusion may I appeal to anybody who keeps a tame Raven, to see that he has a daily opportunity of a wash in a deep bath of clean water, or the plumage will never be kept smart. My Ravens are in faultless condition, and are constantly bathing. Indeed one can scarcely give them greater pleasure than to change their bath water, even several times a day, in summer weather.

ON THE HATCHING AND REARING OF THE
BRUSH TURKEYS AT THE ZOO.*

By A. E. L. BERTLING.

(Head Keeper of the Zoological Society's Gardens.)

In concluding my notes on the Brush Turkey (*Talegalla lathamii*) I am glad to say we have now four young birds which are thriving well.

Being somewhat doubtful as to the issue of the cock's parental diligence, quite six weeks having elapsed since the hens started laying, I decided to open the mound and see how matters stood. Working the material away at one side we got towards the centre and there discovered three eggs, which lay about a foot away from each other and eighteen inches below the top of the mound. They were placed in an upright position, the larger end being uppermost, and it is quite evident they are not *turned* as in the case of those laid by other birds; for we could plainly see that a deep narrow hole had been excavated by the hen, in which the egg had been dropped in an *upright* position, and that the *lower part* of the egg did not touch the bottom of the hole, as it was quite white, whilst the upper half was soiled and stained, where the material had been stamped on to it.

After a few more moments search we were delighted, and not a little astonished, at coming across a pretty chick, who winked and blinked on having the bright sunshine suddenly turned on to it. It was of mouse colour, inclining to yellow on the head and underparts, whilst the red skin on the head and upper portion of the neck was distinctly visible through the scanty covering of bristly down, and at the sides of the face the hair was so thin as to almost appear bare, the ears being plainly visible.

The flights, in this chick, were nearly three inches long, and, as the bird could fly fairly well, I have come to the conclusion that the young remain at least thirty-six hours, if not

* For an account of the construction of the nest and laying of the eggs, see page 217.

longer, in the mound before making an appearance, as the three others, which hatched in the incubator, were not nearly so advanced when hatched. The beak and feet are strong, of a dark horn—nearly black—hue.

The young have the same digging propensity as the adults, and nothing pleased them so much as a heap of peat, upon which I scattered their food ; for they picked up quite large pieces with first one foot and then the other, throwing them backwards in order to get at fragments of food which had fallen between the lumps. They invariably commenced with the left foot, and would rarely touch the food on the flat ground whilst there were any particles left on the peat.

Their pugnacity is evinced at an early stage. The day after the first chick made its appearance a second hatched in the incubator, which, when dried off thoroughly I placed with its elder relative, who immediately dropped its wings into a fighting attitude and pounced upon the new arrival. They soon, however, got to be good friends.

After finding the chick, we decided not to go any further with the excavation, thinking it would be more interesting to have the young emerge from the heap themselves ; so we replaced the material, and left it as near as possible as we found it.

After waiting another fortnight, and no more chicks appearing, I decided to thoroughly overhaul the mound. Almost the first thing we came across was a dead young one, which caused us to come to the conclusion that the density of the materials had prevented it finding its way out, and that the remainder of the eggs had better be removed to an incubator. Seven of these were discovered, two of which, containing living embryos, were unfortunately broken in unearthing. Of the remaining five two hatched and three were addled.

To emphasize the fact as to the thinness of the shell, I may remark that the young ones do not chip round the upper part of the egg when emerging, as is the case with other gallinaceous, and most birds, but appear to give a violent wriggle and shatter the whole shell, although they still remain encased in the inner membrane, which is not torn open for some hours afterwards.

When first hatched the primaries and secondaries of the young are encased in a thin filmy covering, which gives the wing the appearance of being full of blood feathers or quills, but directly the chick dries this membrane peels off, leaving the bird ready for flight.

Those hatched at the Zoo did not appear to be great eaters and they were supplied with a variety of food, such as hard-boiled egg, crissel, chicken meal, ants' eggs, dried flies, boiled potatoes, boiled rice, boiled carrots, groats and grain, of all sorts, both dry and soaked. They were fond of lettuce, watercress, and grass in seed, but evinced the greatest partiality for chopped onions. When large enough they were removed to one of the pheasantries where they do well, and are constantly catching flies on the grass or rushing up and down from one end of the place to the other in a state of great excitement. They like to roost as high as they can get, and the gravel paths in their enclosure are frequently turned upside down by their powerful—although not clumsy—feet. At three weeks the black feathers are distinctly visible through the down, and at six the birds are a repetition of the adults, although smaller, and the yellow wattle at the base of neck can be plainly seen.

Respecting the dead chick in the mound, I may say that a week before we opened it the cock was seen to be in a great state of excitement, and constantly putting his head into a deep, narrow cavity; so I have come to the conclusion that it was about time that the young one hatched. And with regard to the theory advanced that the male bird tests the heat of the mound by putting his head, bare neck, and wattles into the mound, I am rather inclined to think he only does this when the eggs are due to, or have hatched, and that it is from parental affection, or anxiety for the young, as in both cases where chicks were found—living or dead—a narrow opening leading from the young ones to the upper exterior portion of the heaps, was noticed, and although they are particularly silent—only emitting a slight grunt at times—the cock can probably hear some movement in the egg, which either causes him to open the mound when the chick is ready to emerge or to further energetic repulsion of intruders.

Next season, if all is well, I hope to have thirty or forty sacks of dried leaves ready for them, in which case the little ones may be able to find their way out of the mound without human assistance. Of course a dry season is most essential and a lot of rain very detrimental.

WHITE-CRESTED THRUSHES. *

By the Rev. C. D. FARRAR.

In Trinidad there is a certain little brown fish called the Cascaladon, possessing a flavour of the most subtle, entrancing, and captivating description. So much so, indeed, that it is said if a man eat of it, he shall never leave again Trinidad. None, having once partaken, are able to tear themselves away from the fish. All the helpless creatures can do is to succumb, and live and eat and die within reach of it.

That is much my present position. Some two years ago I was reluctantly compelled to give up birds—as I then thought for ever. So certain was I of this, that I not only sold the birds, but even pulled down the aviaries, on the principle, I believe, of removing temptation; and yet here I am to-day, with bird fever as bad as ever. I am beginning in a very humble way, with only just a *few* pairs; and yet I am just as keen to begin as a heifer is for salt; but still I bear in mind the old Latin motto, *Festina lente*—Go slowly. In getting together a collection of birds you must bide your time and watch your opportunity. *Dimidium facti, qui bene cepit, habet*. This is not intuitive wisdom on my part, but is gathered slowly and painfully among the thorns of experience.

Now in starting to keep birds afresh, I find one of the greatest difficulties is to secure pairs. Man is sent into the world unfinished. Nature seems to say to him, "You are incomplete: I have made the other part of you, but I do not remember where I put it: you will have to hunt for it." It is much the same with birds—the pairs are there if you can only find them.

* Presumably the White-crested Jay-Thrush (*Garrulax leucolophus*) of the Himalayas.—ED.

One day during the recent Whitsuntide holidays, I took my youngest boy to Hull for the day, and while there called upon a certain well known bird dealer to see what he might have on hand. Amongst other birds I noticed two White-crested Thrushes in a big cage. These the dealer declared to be a pair; but on this point I felt like Hans Breittmann, 'skebdigal,' as the reputed lady kept on the bottom perch, like the immortal Mrs. Gummidge, in a very forlorn and subdued manner. However, the dealer being a good sort, although still standing stoutly to his own opinion, offered to allow me to take the birds home and try them in an aviary. I gladly acceded to the offer; only to find my judgment instantly confirmed; for the reputed hen spent its whole day in seeking first for one city of refuge and then another, and to save her life I had to move her to other quarters. It was now a question once more of *Cherchez la femme*.

Happening to write to a bird friend, announcing my return to the 'birdy world,' and asking him if he had anything he could offer me, he returned a long list, and amongst them I saw a Crested Indian Thrush scheduled. I accordingly wrote off for it on the chance it might be a White-crested Thrush and a lady. A few days later the bird came to hand, and whatever else it might claim to be it certainly belonged to the ragged regiment.

I felt sure however at the first glance that I had got a hen, and my private opinion was at once confirmed by the cock when I introduced the stranger, for after contemplating each other for a moment with the most offensive curiosity, they went into a perfect shout of welcome. I think the cock's shout was one of astonishment! The hen was perfectly naked from the middle of the breast, and to increase the grotesque effect she had three broken and disjointed feathers in her tail. However, the gentleman apparently considered that half a wife was better than none, and very soon they were seated amicably side by side. The enjoyment of female society, like other things, depends on the scarcity.

I feed the Thrushes on my own mixture—which of course I think the best in the world—and a fair supply of mealworms and blackclocks. The poor clocks have a bad time. Each leg is

chopped off scientifically before the body is swallowed. The Thrushes are evidently vivisectionists on principle—much like the old lady who, after listening to a very violent anti-vivisectionist sermon, remarked: “It is perhaps all true, but I must confess that I like to eat oysters alive”!

I cannot say that the Thrushes are ‘sweet singers,’ like David. Their voices are loud and insistent. If any fresh food is put into their dish they exclaim at the top of their voices: *Pow, pow, pow pow—pow, pow*; reminding one irresistibly of Haydn’s remark on hearing the singing of a Presbyterian congregation—“Ach, Gott is merciful!”

In appearance my friends are of a plain and sober garb: dressed in russet brown, with white heads and waistcoats, and elongated black eye patches. They have a curious habit of playing leap-frog over each other’s back sideways—a most comical sight.

I am in good hope that someday they will enable me to win another medal, but at present they are recuperating. They are most amusing birds to watch and are great bathers. I have written this paper to let my fellow members know that I am once more on the war path and very much alive, and I make no sort of doubt but that I shall find that before so very long I shall be able to say of bird keeping, what Napoleon once said of war: “*Eh, bien! C’est un grand jeu—belle occupation!*”

STRAY NOTES.

In the *Zoologist* for June last Mr. J. H. Gurney publishes his annual “Ornithological Notes from Norfolk,” and records the fact of a Pekin Nightingale (*Liothrix lutea*) having been shot at Holkham on the sixth of November last. It is a great pity that any brightly-coloured bird that is seen in this country must be immediately shot. *Liothrix lutea* is a species that might do very well if established in this country, and there could be no objection to it on the ground of upsetting ornithological records, for it is impossible for it to come here on its own account. We are told that the specimen above referred to “showed no signs of confinement,” but it should be remembered that the present day method of keeping birds in large aviaries ensures their plumage and general appearance being quite as perfect as that of the perfectly wild bird.

Mr. St. Quintin contributes the following note to the *Field* of June 2nd, on some Hybrid Blackgame and Grouse, hatched in captivity:

"Hybrids between Blackgame and Grouse occurring in the wild state must be more common than most people might suppose, for Mr. J. G. Millais, in his work on *British Game Birds*, speaks of having examined some twenty specimens. Probably most of these were wild-bred animals. I have just succeeded in hatching, but, alas! not in rearing, a brood of these hybrids in confinement. Having two tame hen Grouse but no male, I inclosed a fairly tame Blackcock with them this spring, and presently one of the Grouse went to the nest and laid seven eggs. I made the mistake of removing them to a common hen when chipped, substituting three Pheasants' eggs at the same time. Three of the Grouse's eggs hatched; one was promptly crushed by the hen selected for her supposed gentle nature, and one of the remaining chicks lived only for a day, never really feeding properly. The survivor, with a small brood of common Pheasants slightly younger than itself, lived just a week, and as it fed freely upon fresh ants' eggs and chopped egg etc., I hoped it might have been reared. However, it was found dead one morning, and with its poor brother (or sister) has been committed to spirit with a view to closer examination. I may here notice that, as in the subject of Mr. Millais's illustration killed in Inverness-shire, my birds took after their male parent in respect of the toes, which were quite unfeathered. The Grouse has proved an excellent mother to the young Pheasants, and I greatly regret that, from excessive anxiety, I did not leave her own eggs to her care. Curiously, the other hen Grouse shares in the brooding, and the chicks are often divided between the two old birds. I have several times seen the foster nurse brooding the three chicks, while the bird that hatched them sits on some hurdles close above them, as if on guard."

In the same issue of the *Field* appears the following note which is of great importance from an avicultural point of view, as it was supposed that the young Weka at the Zoo, was the first hatched in captivity in Great Britain.

Mr. Charles Langham, of Tempo Manor, co. Fermanagh writes:

"I have kept Wekas in confinement for some years, and they have successfully reared from twenty to thirty young ones to maturity. My first pair I bought from the London Zoo., and placed them in a small grass inclosure on the margin of a lake. They had plenty of covert and could wade about in the water, which they were very fond of doing; they almost immediately started to build a nest in a box provided for the purpose, and soon laid three eggs, only one of which hatched; but this they reared without any difficulty. I then placed them in a larger inclosure under some beech trees, and they reared many young ones, turning over the dead leaves and digging with their powerful bills for worms to feed their young.

with. They generally begin nesting about February or March, but the eggs then seldom hatch, owing no doubt to frost and cold. I usually remove these eggs after about a month's incubation, and they start again shortly and generally rear three or four young out of five or six eggs laid. When the young ones are nearly full grown I remove them from their parents, as I find the old ones are apt to kill them then. They usually bring out two broods every year besides the first nest. I find it almost impossible to keep more than one adult pair together, as they fight desperately. They are very savage with birds of their own size or under, even killing nearly full grown Pheasants. I once saw a cock Weka Rail go up to a good sized cock Pheasant take him by the back of the neck, drag him to the water and drown him. I feed my Wekas on raw bullock's liver, together with corn, bread and scraps, but they get a large quantity of worms and insects for themselves in their inclosure. They even kill small wild birds that come down to feed with them. They make a large nest of moss sticks and fibrous roots, generally under the root of a tree or under some faggots which I provide for the purpose."

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

By far the most important event since my last notes were written is the hatching of three young Crested Screamers on the 5th of July. As before stated, these curious birds have probably never nested in captivity before, and very little was known about their nesting habits. The incubation period is now known to be six weeks; the young are clothed in yellowish down, and except for their small beaks and large feet, are not unlike young goslings. One of the chicks was trodden upon and killed by its mother, and an opportunity has thus been given to the authorities of fully examining the structure of these birds when newly hatched, and it is to be hoped that a definite conclusion may be arrived at as to the position these unique creatures occupy in the Order of Birds. A full account of the breeding of these birds with illustrations of the young will doubtless appear in the *Proceedings of the Zoological Society*.

Two hybrid Rheas, between the Common (σ) and Darwin's (♀), have been hatched in an incubator, and are doing well. A Globose Curassou has nested in a willow tree in the large aviary near the Pelicans, and had laid two eggs when I last heard from

the Head Keeper (July 17th). He tells me also that a pair of Jackal Buzzards are busy nesting.—D. S.-S.

The following is a list of additions during the month of June:

JUNE	3.	2	Brush-Turkeys (<i>Talegalla lathamii</i>).	..	(Australia).
"	3.	6	Summer Ducks (<i>Æx sponsa</i>).	..	(N. America).
"	4.	2	Cayman-Island Amazons (<i>Chrysotis caymanensis</i>).		Cayman Is.
"	4.	1	Hybrid Weka Rail (<i>Ocydromus brachypterus</i> × <i>O. earli</i>).		(New Zealand).
"	4.	1	Rufous-necked Weaver-bird (<i>Hyphantornis textor</i>).		W. Africa.
"	6.	1	Wandering Tree-pie (<i>Dendrocitta vagabunda</i>).		India.
"	7.	2	Hooded Crows (<i>Corvus cornix</i>).	..	Ireland.
"	10.	1	Maned Goose (<i>Chenonetta jubata</i>) ♂.	..	Australia.
"	11.	1	Bare-eyed Cockatoo (<i>Cacatua gymnopsis</i>).	..	S. Australia.
"	13.	1	Javan Peafowl (<i>Pavo specifer</i>) ♂.	..	Java.
"	14.	2	Carion-Crows (<i>Corvus corone</i>)	..	Europe.
"	15.	2	Grey-headed Porphyrios (<i>Porphyrio poliocephalus</i>).		India.
"	16.	4	Common Teal (<i>Querquedula crecca</i>) 2 ♂, 2 ♀.	..	Europe.
"	16.	2	Greater White-crested Cockatoos (<i>Cacatua alba</i>).		Moluccas.
"	17.	3	Common Bitterns (<i>Bolaurus stellaris</i>).	..	Europe.
"	18.	1	Blue-fronted Amazon (<i>Chrysotis æstiva</i>).	..	S. America.
"	18.	2	Grey-breasted Bullfinches (<i>Pyrrhula griseiventris</i>) 2 ♂.	..	Japan.
"	20.	1	Ganga Cockatoo (<i>Callocephalon galeatum</i>).		New South Wales.
"	20.	1	Lineolated Parrakeet (<i>Bolborhynchus lineolatus</i>).		Mexico.
"	20.	1	Golden-fronted Parrakeet (<i>Brologerys tuipara</i>).		S. America.
"	20.	1	Grey-winged Ouzel (<i>Turdus boulboul</i>).	..	India.
"	21.	3	Talisch Pheasants (<i>Phasianus talischensis</i>) 1 ♂, 2 ♀.		S.-W. Borders of Caspian.
"	23.	1	Allen's Porphyrio (<i>Hydrornia alleni</i>).		Captured at Sea.
"	24.	1	Rose-crested Cockatoo (<i>Cacatua moluccensis</i>).		Moluccas.
"	27.	1	Raven (<i>Corvus corax</i>).	..	British Isles.
"	26.	2	Brush-Turkeys (<i>Talegalla lathamii</i>).	..	(Australia).
"	28.	1	White-backed Piping-Crow (<i>Gymnorhina leuconota</i>).		S. Australia.
"	29.	1	Raven (<i>Corvus corax</i>).	..	British Isles.
"	29.	2	Ural Owls (<i>Syrnium uralense</i>).	..	N. Europe.

CORRESPONDENCE, NOTES, ETC.

MY EXPERIENCE OF THE NESTING OF THE GREY
SINGING-FINCH.

SIR,—I bought from Mr. Hawkins, of Bear Street, Leicester Square, a pair of Grey Singing-finches last August, and kept them during the winter in separate cages. Whenever they were placed close together the cock bird grew very excited and clung to the bars nearest, singing most sweetly to his dear little mate, who would listen with her little head cocked on one side.

In March I let the cock into the cage in which was the hen and a number of Waxbills. The Singing-finches at once seemed desirous of building a nest, which they did. Three Silverbills were very naughty and pulled all the materials about, and ended by all three promptly occupying the nest, so I thought I had better isolate the Singing-finches.

I placed them in a breeding cage and hung a nest on the outside of the cage and gave them some thrums. They at once commenced to build, making the neatest nest I ever saw, and laid four eggs. The little hen had great difficulty in laying her first egg, I thought I was going to lose her: she sat such a pathetic little puffed up ball all day, the cock hopping around trying to make her take food. The next day she still had not laid her egg, so I gave her one drop of castor oil, but it had no effect; then I gave her sponge cake soaked in sherry, after that she soon laid her egg.

Three of the eggs were duly hatched on the twelfth day. I had been giving the birds Mr. Hawkins's egg food slightly moistened, and this they gave readily to the young birds. All went well until the eleventh day, and when I came down at 6 a.m. I found, to my horror, two dead birds in the nest and one dead on the floor of the cage with a hole pecked in it. I wondered if the cock had grown tired of feeding his babies, or wanted to go to nest again; however, I resolved if there were more eggs I would separate the cock from the newly-hatched birds.

In April four more eggs were hatched and I took the cock away at once. For three days the little hen did bravely, but I thought the strain was too much for her: they were such tiny helpless things, and she had quite a difficulty in getting them to hold their heads up, so I thought if I tied the cock's little cage on to her cage he might feed her through the bars, and it would cheer her up. The plan worked very well, and she was much more brisk; but, alas, on the ninth day she gave them all seed, and I discovered the chicks all dead in the nest, their throats swollen and the poor little hen in a great state. I felt very upset, as I had been constant in my care of them, giving the birds freshly-mixed food every two hours, as they seemed to like very small quantities at a time, and it soon grew dry.

I put them both into my flight cage with all the other birds, but the

little hen never seemed to get over her second loss. She would not have anything to do with her husband, but nestled up to a placid old Spice-bird, who used to mother her a great deal, and at night they would squeeze up so tight against each other they looked one bird. The little hen grew puffier and puffier and thinner and thinner and very tame, until at last she died on the 9th of June.

Could anyone tell me if they have experienced any such difficulty in breeding this particular finch, and if I ought to have given different food?

I do not feel inclined to try again.

E. MERRYLEES.

PARRAKEET NOTES.

SIR,—You will be interested to know my Yellow-rumps have a nest of young (two or three) they are now about nine days old and I hope I shall be able to rear them. I had a nest of three young Turquoisines, but the old ones left them one night before they were feathered properly and they all died. The Blue-banded, Bourkes, and Alexandras are all doing well, the latter laid a clutch of four eggs, but I took them away.

WM. R. FASEY.

THE MANY-COLOURED PARRAKEET.

My old pair of Many-coloured Parrakeets (*Psephotus multicolor*), which have now been in my possession for about five years, have reared three fine young birds again this year. The hen went to nest in March, laying three eggs, all of which however proved to be clear. Like a sensible bird she decided to try again, with the result that all three eggs of the second clutch hatched, and the three young birds left the nest on June 23rd. Last year all three young birds reared were hens, but I am glad to say one of the present brood is a cock, and a fine fellow too.

D. SETH-SMITH.

A FINCH-LARK.

SIR,—I am sending you a body of a little bird (I have five others alive), which I got at Marseilles, it is said to come from Madagascar, and I put it down for a Finch-Lark, and I should feel much obliged for its identification.

H. B. RATHBORNE.

The following reply has been sent to Mr. Rathborne :

Mr. C. Chubb of the Natural History Museum writes to me as follows: "The bird you sent is a Finch-Lark (*Pyrrhulanda verticalis*) and most probably comes from South Africa. It does not show any sign of a vertical spot, but we have specimens in our series just like it: it is perhaps rather a young bird."

In the List of the Zoological Society this bird is called the "White-headed Bullfinch-Lark,"—a strange name for a Black-headed bird with white cheeks!

A. G. BUTLER.

BREEDING ST. HELENA SEED-EATERS.

SIR,—As my St. Helena hen Seed-eater is sitting, I should be much obliged if you would kindly let me know whether, when young arrive, ought one to give anything extra beyond their ordinary food to help them feed their young. The seeds in the aviary are millet, canary and spray millet, and there is a small plot of grass.

NICHOLAS S. O'REILLY.

The following reply has been sent to Mr. O'Reilly.

When breeding, the St. Helena Seed-eaters should be supplied with a mixture of sweet biscuit, preserved yolk, and ants' eggs; also chickweed and groundsel. Being Canaries, they require much the same treatment as the domesticated Serin. If you can get a few small smooth green caterpillars they will be appreciated.

A. G. BUTLER.

BIRDS FOR PARK AVIARY.

Reply to a letter received from a Member in the United States:

The most profitable large birds to keep for park aviaries are the various Pheasants, which are also very hardy; but the different kinds must be kept separate if you want to breed from them. For an attractive show, a number of cocks of different kinds may be put together, but most people would rather breed them.

Along with Pheasants, you can keep and breed Doves, large Finches, Parakeets, and, if you have a small pond in the aviary, refreshed by a stream so as to prevent the water getting foul, some of the surface-feeding Ducks.

Cranes are rather large for aviary birds, and are better kept wing-clipped or pinioned in a large paddock with a pond, and a warm sheltered shed for winter use. With these, however, breeding is not certain.

Cockatoos have seldom been bred in captivity, and, like all the Parrot tribe, are destructive to vegetation, but they are very attractive in a big aviary, and will sometimes breed.

I cannot say what the prices of birds would be in the United States; you can find out what they cost here by consulting the advertisements in this Magazine or the *Feathered World*.

For a big public aviary you would find the following collection very striking, hardy, and likely to breed, and not unduly expensive. Gold Pheasants, Cockatiels, Leadbeater Cockatoos; Rosella, Quaker, and King Parakeets, Nicobar and Crested Pigeons, and Mandarin Ducks, among birds

foreign to you; and of your native birds, Passenger Pigeons, Carolina Parakeets, Wood-Ducks, and Red Cardinals. As the first three of these last have got so scarce, all American public collections of live animals should make a point of breeding as many as they can, to save the species from extinction.

All those I have named are grain and seed-eaters, but if you care to go in for fish- and insect-eaters as well, you will find Jays, Crows, Troupials, and the smaller Gulls, Herons, and Ibises most attractive additions, but as some of these would be destructive to eggs and young birds, the breeding results might not be so good.

About the best Crane is the Demoiselle, of the Old World, but your native White and Sandhill Cranes are nice birds, and with these you might associate Peafowl, Silver Pheasants, Sheldrakes, and Geese, all of which are suitable for paddocks. Swans and Flamingoes are good if you have a large sheet of water.

F. FINN.

COLOURED PLATES FOR VOL. III. (N. SER).

The Editor would be glad to receive suggestions from members as to the subjects for coloured plates for next year. It is desirable to illustrate only such birds as have not before been well figured, or of which good figures are inaccessible to most people. All suggestions received will be laid before the Executive Committee.

ANNUAL MEETING OF THE COUNCIL.

AMENDMENT OF RULES.

The Annual Meeting of the Council was held on June 23rd, Mr. August F. Wiener, Vice-President, in the chair.

The election of Mr. T. H. Newman to fill the post of Hon. Business Secretary was confirmed. The Bus. Secretary then produced a statement of the receipts and expenditure during the first six months of the current year, showing a balance in hand of £94 11s. 9d.

The following amendments to the Rules were proposed and carried unanimously:

Rule 3, line 6. *Delete* "and . . . Committee."

Follow *Rule 7* by *Rule 9* (which now becomes *Rule 8*).

Rule 9 (which will now be *Rule 8*). *Delete* all but first paragraph and substitute as follows:—

The members of the Council shall retire by rotation, two at the end of each year of the Society (unless a vacancy or vacancies shall occur otherwise), and two other members of the Society shall be recommended by the Council to take the place of

those retiring. The names of the two members recommended shall be printed in the September number of the *Avicultural Magazine*. Should the Council's selection be objected to by fifteen or more members, these shall have power to put forward two other candidates whose names, together with the signatures of not less than fifteen members proposing them, must reach the Hon. Business Secretary by the 15th of September. The names of the four candidates will then be printed on a voting paper and sent to each member with the October number of the Magazine, and the result of the voting published in the November issue. Should no alternative candidates be put forward, in the manner and by the date above specified, the two candidates recommended by the Council shall be deemed to have been duly elected. In the event of an equality of votes the President shall have a casting vote.

Rule 9. Immediately after the election of the Council, that body shall proceed to elect three from its members (*ex-officio* members not being eligible). These three, together with the Secretaries and Editor, shall form a Committee known as the Executive Committee. Members of the Council shall be asked every year (whether there has been an election of that body or not) if they wish to stand for the Executive, and in any year when the number of candidates exceeds three there shall be an election of the Executive.

The duties of the Executive Committee shall be as follows:

- (i.) To sanction all payments to be made on behalf of the Society.
- (ii.) In the event of the resignation of any of the officers during the Society's year, to temporarily fill the vacancy until the end of the year. In the case of the office being one which is held for more than a year (*e.g.* Secretaries, Editor, or Treasurer) the appointment shall be confirmed by the Council at its next meeting.
- (iii.) To act for the Council in the decision of any other matters that may arise in connection with the business of the Society.

The decision of any matter by the Executive to be settled by a simple majority (five to form a quorum). In the event of a tie on any question, such question shall be forthwith submitted by letter to the Council for their decision.

The Executive shall not have power

- (i.) To add to or alter the Rules;
- (ii.) To expel any member;
- (iii.) To re-elect the Secretaries, Editor, or Treasurer for a second term of office.

It shall not be lawful for the Treasurer to pay any account unless such account be duly initialed by the Executive.

It shall be lawful for the Business Secretary or Editor to pledge the Society's credit for a sum not exceeding £15.

Should a member wish any matter to be brought before the *Council* direct, such matter should be sent to the Business Secretary with a letter stating that it is to be brought before the Council at the Annual Meeting: otherwise communications will in the first place be brought before the Executive.

A decision of a majority of the Council, or of a majority of the Executive endorsed by the Council, shall be final and conclusive in all matters.

Rule 8 (renumbered *Rule 10*). For "Council," wherever it occurs, read "Executive Committee." Line 4. *Delete* "The decision . . . matters."

Delete Rules 10 and 15.

[N.B. The complete list of Rules, as amended, will be published as usual in the November issue].

The meeting terminated with a vote of thanks to the Chairman.

T. H. NEWMAN, *Hon. Bus. Sec.*

THE SOCIETY'S MEDAL.

A medal has been awarded to Miss R. Alderson for having successfully bred the Rufous Dove, *Leptoptila reichenbachi*, and to Mr. D. Seth-Smith for having successfully bred the Brush Bronzewing Pigeon, *Phaps elegans*, both for the first time in the United Kingdom.*

Mr. D. Seth-Smith has reared young of the Scaly Dove, *Scardafella squamosa*, and of the Tataupa Tinamou, *Crypturus tataupa*, and accounts of both are now published. It is believed that both of these cases are the first on record for the United Kingdom, and the Council propose to award a medal in each case. Any member or reader knowing of a previous case is requested to communicate without delay with the Hon. Business Secretary.

* We hear that Mr. Castle-Sloane has also bred the "Rufous Dove," but the young were not hatched until June 6th (Miss Alderson's having left the nest on May 13th), and Mr. Castle-Sloane is not quite certain of the species to which his Doves belong.

THE ILLUSTRATION FUND.

The Council acknowledge with many thanks the receipt of a donation of £5 from Mr. Castle-Sloane, and one of £1 1s. from Mrs. Johnstone, which brings the total amount received to July 25th, up to £26 3s. 6d. We believe that there are still a number of members who would like to help the Society by contributing towards this fund, and the Hon. Secretary will be glad to receive donations however small—or large.

POST MORTEM EXAMINATIONS.

RULES.

Each bird must be forwarded, as soon after death as possible, carefully packed and postage paid, direct to Mr. ARTHUR GILL, M.R.C.V.S., Veterinary Establishment, Bexley Heath, Kent, and must be accompanied by a letter containing the fullest particulars of the case. Domestic poultry, pigeons, and Canaries cannot be dealt with. If a reply by post is required a fee of 2/6 must be enclosed.

BROWN OWL (Mr. Cushny). [Your bird died of congestion of the bowels, in my opinion, brought on by indigestion from the want of a larger proportion of natural food. The carnivorous birds, especially Hawks and Owls, when young require a plentiful supply of small mammals and birds. Your bird was terribly emaciated. It is supposed by some to be a fallacy that it is necessary for these birds to have food from which they can form casts, but if you will try the experiment of feeding one on liver and muscular tissue only, and another on small mammals and small birds, the answer will soon be practically demonstrated. Thanks for P. O. 2/6].

TWO ROSELLAS (Mr. T. N. Wilson). [Birds are much emaciated and anæmic. When purchasing new Parrakeets it is always well to handle them to ascertain their condition. Should they be plump you are safe in giving millet and canary with a moderate amount of fruit or green food, and care should also be taken as to the introduction of grit for a while, as they are likely to become ravenous after it. My advice is never to purchase an emaciated specimen unless very much required. All such specimens should be carefully isolated, and, if necessary, kept in a warmed aviary large enough for them to fly about in. In addition to millet and canary a reasonable amount of hemp may be given, and some species will eat flax seed with benefit, to which add dari, wheat, and boiled maize. Many thanks for P. O. 2/6].

PARADISE WHYDAH (Mr. A. F. Wiener). [Your bird died as a result of brain pressure, caused by an extensive blood extravasation at the anterior part of brain, immediately at base of beak and extending at the back of the orbits. It certainly suggests a direct injury at point of beak. Thanks for P. O. 2/6].

- BLUE ROCK THRUSH (A. Trevor Battye, Esq.) [Your bird died of apoplexy, the blood clot extended over the whole superior part of cerebrum. It is a great pity, as I think I never saw such a perfect specimen before].
- GREY WAXBILL (Mrs. Hart). [Your bird died of pneumonia. You do not say if the aviary is in or out of doors and you neither mention grit nor green food in the diet. The pneumonia is caused by chill. Many of these tiny mites when bathing, so saturate themselves that they cannot dry before getting chilled and it is wise to prevent excessive bathing until birds are acclimatized].
- CORDON BLEU (The Hon. Lilla de Yarburgh Bateson). [Your bird died of congested liver probably caused by chill. It is useless to attempt treatment without correctly diagnosing the complaint].
- Hen CALIFORNIAN QUAIL (Miss R. Alderson). [Bird was much emaciated and suffered with a large abdominal tumor].
- GREY PARROT (Miss B. Mortimer). The bird died of exhaustion consequent on inflammation of the bowels. There was slight congestion of the lungs, but death being so gradual, one would expect this from weakness of the heart. You do not say what your mixed seed contained. When purchasing a Parrot one should always ascertain how it has been fed, and if any change is to be made it should be gradual. Your milk and water and beef tea is undoubtedly a mistake. Fine oatmeal gruel and a little brandy would be much better. Animal food in any form is detrimental to seed-eating birds. Many thanks for P. O. 2/6].
- WAXWING (Mr. P. W. Thornily). [Your bird died of inflammation of liver. You do not state diet, so cannot advise possible cause].
- RED-FACED LOVE-BIRD (The Lady William Cecil). [Pneumonia was cause of death brought about by chill. These appear to be extremely delicate for some time after importation].
- ZEBRA FINCH hen (Mrs. Sherston). [This bird died of pneumonia].
- DIAMOND SPARROW hen (Miss Goddard). [Pneumonia caused death, contracted probably on the journey you mention].
- TRUMPETER BULLFINCH (The Hon. Mrs. Drewitt). [Acute inflammation of the bowels caused death].
- BLACK-HEADED GOULDIAN (Captain Horsburgh). [Died of pneumonia of long standing, the right lung being solid. The constipation was due to the fever present. You could have done little or nothing for him].
- CORDON BLEU (Mrs. D. Waterhouse). [Pneumonia was cause of death].

ARTHUR GILL.

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1 pair Pennant's Parrakeets 45/- pair, 1 pair rare Red-bellied Parrakeets 45/-, 2 pairs White-eared Couures 30/- pair, Rosellas 30/- pair, Red-faced Lovebirds 15/- pair, Madagascar Lovebirds 4/6, 2 Nanday Parrakeets 25/- pair, 1 Leadbeater's Cockatoo £2, 1 Blue-crowned Couure 10/-, 2 Yellow Budgerigars 20/- pair, 3 aviary-bred young Cockatiels 6/6 each, 2 acclim. Rose Cockatoos 10/- each, pair Plumhead Parrakeets 15/- pair, 4 Redrumps £1 10/- pair, 1 pair Port Lincolus 45/-. Also finest lot of Doves in England—3 pairs Red Mountain Doves £3 pair, 3 rare Brazilian Doves (name not known) £2 pair, 2 pairs Scaly Ground-Doves £1 pair, 12 pairs Talpacoti Doves 10/6 pair, 4 pairs Steel-barred Doves 15/- pair, White-winged Doves 7/6 each, 2 pairs Blue Grosbeaks 20/- pair, 5 pairs Zebras 3/6 pair, 7 Singing-finches 4/6 pair, 5 Whydahs 5/- pair, Senegal Finches 2/- to 5/- pair, Laughing Jays rare 40/- each, Archbishop Tanager 20/-, aviary-bred Cutthroats 4/- pair, 6 Blue-fronted Amazons 16/- to 30/- each, 3 Californian Quails 16/- pair, 4 cock Indigos 6/6 each full colour, hens 6/- each, 6 cock Nonpareils 8/6 each, Bib Finches 8/6 pair, 1 Long-tailed Glossy Starling 40/-, 12 Rosy Pastors fine 7/6 each, 4 rare Weavers 6/- each, 2 Grenadiers coming into colour 6/6 each, 1 pair Blue-cheeked Jays £3 10/-, 2 pairs Barnard's Parrakeets £2 pair, 1 small rare Macaw 36/-, 1 Senegal Parrot 20/-, pair Scarlet Tanagers 30/- true pair, 3 Lavender Tanagers 12/6 each, 1 rare brilliant Red Tanager cock gem 30/-, 2 rare Brown Starlings 6/6 each, 1 rare Black-throated Starling 45/-, 3 Giant Toucans 45/- each, 4 rare Yellow-bellied Grosbeaks 30/- each, 2 rare Brazilian White Egrets £4 each, 4 Demoiselle Cranes (pinioned) £4 10/- pair, pair Storks 36/-, Spoonbills (pinioned) 30/- pair, Flamingoes £10 10/- pair, 6 pairs Araucaian Scaly-necked Pigeons from Chili £4 pair very rare, 10 pairs Senegal Doves beauties 15/- pair, Vulturine Guinea Fowl, Brazilian Motmot, Crown Pigeons, Crown Tanagers, Magpie Tanagers (*Cissopis leuenses*). White Javas 10/- pair, Australian Crested Doves 22/6 pair. Also due to arrive in September Sarus Cranes, Common Cranes. Also *Grus vipio*, *Grus leucauchen*, *Grus monacha*, Lories, Houbara Bustards, Talking Minahs, Shiāmas, etc., etc.

Also quantity rare and common Waterfowl, Chinese and Egyptian Geese, Barr-head, Bean, and Brent Geese, Muscovy, Cayuga, Indian-Runner, Mandarin, Carolina, Widgeon, Teal, Garganey, Pintail, Mallards, Tree Ducks, Brazilian Blue-winged Teal, Shellducks, Ruddy Ducks, etc.

Stock Always Changing.

III.

NOTICES TO MEMBERS—(Continued from page ii. of cover).

NEW MEMBER.

Mr. A. D. BEARDALL, 12, Middle Hill, Weekday Cross, Nottingham.

CANDIDATES FOR ELECTION.

Miss FLORENCE CHAMPION; Moira House, College Road, South Dulwich.

Miss GEORGINA WOLFE; St. John's, 57, Grenada Road, East Southsea.

And

Sir WM. INGRAM, Bart; Westgate-on-Sea.

Proposed by Dr. BUTLER.

Mr. ROBERT I. GUNTHER; Park Wood, Englefield Green, Surrey.

Proposed by Mr. H. C. MARTIN.

Mr. W. L. SCIATER, M.A., F.Z.S., Director of the South African Museum, Capetown, South Africa. *Proposed by* the Hon. Bus. Secretary.

Mr. ALLEN SILVER; Long Melford, Suffolk.

Proposed by Mr. ARTHUR GILL.

MEMBERS' SALE AND EXCHANGE COLUMN.

The charge for private advertisements is one penny for every four words. Names and addresses of advertizers must be paid for. Each statement of price, such as 3/6, is counted as one word. Every advertisement must be prepaid, and MUST reach the EDITOR not later than the 19th of each month. The Council reserve the right of refusing any advertisement they may consider undesirable.

Pairs—Yellow Budgerigars 15/-; White Java Sparrows 10/6; White-throated Finches 7/6; Green Singing-Finches 4/6; cock White Java 5/-; hen Parson 5/6. All adult birds from outside aviary.

ELLIS, 34, York Street, Wakefield.

Aviary-bred Ribbon-Finches 1/9 pair, (3 pairs 5/-); hen Bengalee 3/-; cock Cordon 3/6; exchange Zebra-Finch and Cordon hens.

Mrs. BARBER, Wickford.

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To effect immediate clearance, following true pairs for disposal—Talapoti Doves 12/6; Picui 15/-; Scaly 20/-; Senegal 15/-; Crested 25/-; Red-Mountain £3; Aracanian Pigeons £3. Lovely Teal Ducks, pinioned, 12/6; Red-faced Lovebirds 15/-; cock Indigo 7/6; cock Noupareil 8/6 both full colour. B. MASON, North Parade, Lincoln.

Splendid pair Green Singing-Finches 7/6, cock in full song; pair Rosellas (perfect) 50/-; Spicebirds, Three-coloured Manakins, Black, and Fawn Bengalese, and Bronzewings, 4/- pair; splendid pair Blue-crowned Coures 20/-; cock Cinnamon Dove 5/-; perfect Chinese Laughing-Thrush 40/-; Chocolate Tanager 18/6.

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THE JOURNAL OF THE AVICULTURAL SOCIETY.

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LONDON :

R. H. PORTER, 7, PRINCES ST., CAVENDISH SQUARE, W.

NOTE.—A new volume commences every November.

II.

☛ All Subscriptions should be sent to the Honorary Business Secretary.

THE AVICULTURAL SOCIETY.



Persons wishing to join the AVICULTURAL SOCIETY are requested to communicate with either of the Hon. Secretaries or the Editor.

NOTICES TO MEMBERS.

The Subscription to the Avicultural Society is 10/- per annum, due on the 1st of November in each year, and is payable in advance. The entrance fee is 10/6. The *Avicultural Magazine* is sent free to members monthly. Members joining at any time during the year are entitled to the back numbers for the current year, on the payment of entrance fee and subscription.

All MSS. for publication in the Magazine, Books for Review, and Private Advertisements should be addressed to the Editor, Mr. D. SETH-SMITH, Glengarry, Canning Road, Addiscombe, Surrey.

All Queries respecting Birds (except *post mortem* cases) should be addressed to the Honorary Correspondence Secretary, Dr. A. G. BUTLER, 124, Beckenham Road, Beckenham, Kent.

All other correspondence, and Subscriptions, should be sent to the Honorary Business Secretary, Mr. T. H. NEWMAN, 20, Montpelier Square, London, S.W. Any change of address should be at once notified to him.

Advice is given, *by post*, by members of the Council to members of the Society, upon all subjects connected with Foreign and British birds. All queries are to be addressed to the Hon. Correspondence Secretary and should contain a penny stamp. Those marked "Private" will not be published.

The Magazine is published by Mr. R. H. PORTER (7, Princes Street, Cavendish Square, W.) to whom all orders for extra copies, back numbers, and bound volumes (accompanied by remittance) should be addressed.

Cases for binding Vol. I., New Series, of the Magazine (in art cloth, with gold block on side) can be obtained from the Publisher, post free and carefully packed, at 1/6 each; or the Publisher will undertake the binding of the Volume for 2/6, plus 8d. for packing and postage. All orders must be accompanied by a remittance in full; and Members are requested to state whether they want the wrappers and advertisements bound in at the end or not.

BOUND COPIES OF THE "AVICULTURAL MAGAZINE."

The following can be obtained from the Publisher at the prices given below. Postage 6d. per volume extra :

Vol. II., 6/- to members; 8/6 to the public.

Vols. V. to VII., 10/6 each to members; 12/6 each to the public.

Vol. VIII., 14/- to members; 17/6 to the public.

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(Continued on page iii. of cover).

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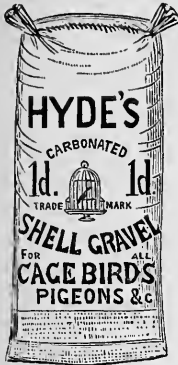
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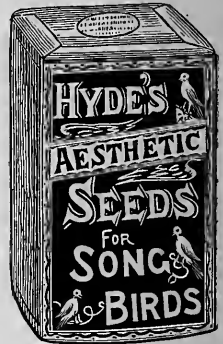
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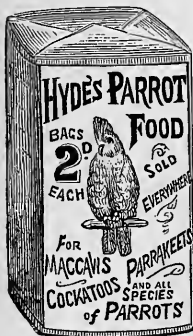


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THE
BIRDS OF TENNYSON,

BY
WATKIN WATKINS, B.A. CANTAB.

Member of the British Ornithologists' Union.

"Many as are the volumes which have been written on different phases and aspects of our late Laureate's works, this, we think, is the first time that a whole book has been devoted to "The Birds of Tennyson." Mr. W. Watkins, the author, is a member of the British Ornithologists' Union, and has, therefore, a scientific as well as a literary interest in the subject. And his verdict in the matter is this—that 'No poet is so satisfactory to the ornithologist [as Tennyson], for no poet had a more accurate knowledge of birds or had a happier power of describing their peculiarities.' Mr. Watkins' pages are, indeed, themselves a testimony to the acuteness as well as the frequency with which Tennyson described the 'feathered tribe.' All this, of course, is an old story to the students of the poet, but it is pleasant to find Tennyson's references to birds collected and systematised as they are in this agreeable treatise, which is, as it should be, carefully and usefully indexed. In his introduction Mr. Watkins deals with Tennyson's allusions to birds in general, and in subsequent chapters discourses successively of birds of song, birds of passage, birds of prey, birds of sport and so forth. The result should convince those who are not already convinced that as a poet of the birds Tennyson ranks with Shakespeare. Mr. Watkins, as a naturalist, of course appreciates fully the poet's stanzas on 'The Thristle,' of which the ignorant have been accustomed to make game. He recognises the fidelity with which the bird's 'note' is reflected in such lines, homely enough, as—

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I know it, I know it, I know it.'

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"Mr. Watkins, who must have spent a vast deal of time in the study of Tennyson's poetry from the natural history point of view, publishes a number of extracts, and enlarges on them in a most interesting manner. Mr. Watkins' book should prove very acceptable to Tennyson lovers."—The Yorkshire Post.

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FIG. 2.
E. lineata.



FIG. 1.
Excalfactoria chinensis.



FIG. 3.
E. chinensis × *E. lineata*.

NEWLY HATCHED PAINTED QUAILS.

Avicultural Magazine,

BEING THE JOURNAL OF THE

AVICULTURAL SOCIETY.

New Series.—VOL. II.—No. 11.—All rights reserved.

SEPTEMBER, 1904.

SOME NOTES ON THE PAINTED QUAILS.

Excalfactoria.

There are few birds which give me more pleasure as an aviculturist than the tiny Painted Quails; their small size, the readiness with which they become tame, the free way in which they reproduce their kind in captivity, and the ease with which the young may be reared, all commend these beautiful little birds to the consideration of aviculturists.

I obtained my first pair of the Common Painted Quail, *E. chinensis*, in the autumn of 1897, and have never been without examples since, and I have also kept and bred the Australasian form, *E. lineata*, so perhaps a few notes on these birds may not be out of place.

The genus *Excalfactoria* contains, according to Dr. Sharpe's *Hand List*, four species. All are very small birds, about five inches in length. The tail is composed of only eight very short feathers, which are entirely hidden by the upper tail-coverts. The sexes are entirely different in plumage, and the males are decidedly beautiful.

The common species, *E. chinensis*, ranges throughout the Indian Peninsula, Ceylon, and the Indo-Chinese countries. It is also found in the islands of Formosa, Celebes and Ternate. This species is well known to most of my readers, and those who do not know it should refer to Vol. IV. (First series) p. 1,

where a coloured illustration of it is given. The plate does not do justice to the subject, but conveys a fair idea of the birds.

The Australian Painted Quail, *E. lineata*, inhabits Australia, the Philippines, Borneo, Java and Sumatra. It is slightly smaller than *E. chinensis*, and darker in colour.

The New Britain Painted Quail may be distinguished from either of the above by the absence of chestnut on the wing-coverts, and by the underparts being almost entirely slaty-blue. It inhabits New Britain, New Ireland, and the Duke of York group.

Adanson's Painted Quail, *E. adasoni*, inhabits the greater part of Africa, and differs but slightly in plumage from the others.

It is with the common species, *E. chinensis*, and the dark form from Australasia, *E. lineata*, that I have had some experience in captivity, and to which I shall chiefly confine my remarks. I do not believe that living examples of either of the other two forms have reached this country; and I think that the three examples—one male and two females—of *E. lineata*, that I received from Australia in 1900, were the first, and perhaps the only specimens ever imported.

Mr. Ogilvie-Grant considers *E. lineata* to be merely a sub-species of *E. chinensis*; and probably he is right, though observation of the two forms in captivity shows them to differ considerably in some of their ways. The point which I think is worth especial notice in this connection is the difference which exists in the colour of the newly-hatched young of *E. chinensis* and *E. lineata*, and one of my chief objects in writing this paper is to call attention to this point, which I believe was never noticed by ornithologists until I called attention to it at a meeting of the British Ornithologists' Club in June 1903.

The young of the typical *E. chinensis* (Fig. 1) are like the young of the Common Quail, only much smaller. The predominating colour is very dark brown. On the back are two very distinct stripes of sandy buff, running from the nape to the tail. The head is sandy buff, with two distinct stripes of very dark

brown. The throat is pale yellow, and the underparts yellowish. It would naturally be supposed that the newly hatched chicks of the Australasian form, differing so slightly when adult, from the Asiatic birds, would be identical with the young of the latter, but instead of being so they are absolutely distinct, being almost entirely black (Fig. 2). On the head one can just trace the buffish lines, which however are entirely absent on the back, which is entirely blackish. The throat is yellow as in *E. chinensis*, but the underparts are considerably darker than in the typical form.*

The two forms interbreed perfectly freely, and the newly hatched chicks, as might be supposed, are intermediate between the two,—much darker than in *E. chinensis*, but showing faintly the buffish stripes which are lacking in *E. lineata* (Fig. 3). These hybrids, or mongrels, are perfectly fertile, which seems to show that Mr. Ogilvie-Grant is right in calling *E. lineata* merely a sub-species of the Asiatic form, though it is as distinct from that form as, for example, is the Japanese Pheasant (*Phasianus versicolor*) from the common Ring-necked birds (*P. torquatus*). If only we could get living examples of *Excalfactoria adansoni* and *E. lepida* we might be able to prove, by crossing them with *E. chinensis*, whether they too would produce fertile hybrids, or whether they are really good species. It has been fairly proved in the case of the Pheasants that most forms of *Phasianus* are merely local varieties or sub-species, and this has been shown chiefly by crossing the different forms and finding that the young are perfectly fertile however they are crossed. It is reasonable to conjecture that the result of experiments in breeding *Excalfactoria* would show that the forms which are now regarded as distinct species are merely local races or sub-species.

When acclimatised, the Painted Quails are quite hardy and need no artificial warmth during the winter, if kept in a dry, sheltered aviary. To breed them successfully, I consider that a

* It is perhaps worth mentioning that the male *E. lineata* showed no parental affection towards his chickens; whereas the males of the Eastern form always, as far as I have been able to observe, brood their offspring to the same extent as the females, each parent, as a rule, taking charge of about half of the brood.

grassed aviary is necessary, although I have known a hen to sit and hatch off a brood in a perfectly open, uncovered nest. The grassed run need not be more than say eight feet square. The nest usually consists of a slight hollow under a tuft of coarse grass, slightly lined with hay. It is generally most cleverly hidden, and approached through a tunnel in the grass. The birds usually commence to breed in May. The clutch consists of from five to seven eggs, generally five or six in the first nest, and seven in the others. There are three nests in the year as a rule, although a pair of *E. lineata* hatched four broods in 1900, when only recently imported; the last brood however were found dead early one morning in October. They had been hatched the previous evening, but had succumbed to a frosty night.

When hatched, the young Quails are very minute, about one inch in length, and, as I have noticed on more than one occasion, they are quite capable of getting through half-inch mesh wire-netting. They run at once, and resemble tiny animated balls of fluff.

Though so minute the chicks are easy enough to rear. Live ants' cocoons are the very best food they can have, but failing these almost any good soft food that contains a good proportion of yolk of egg is readily eaten. Very small gentles are useful, though I have reared broods on the egg-food entirely. Seed is eaten when the chicks are still quite small, and I have found the small "Indian" millet very useful when they first take to a seed diet. The chicks can fly at ten days old, and, as was first pointed out by Mr. Meade-Waldo (*cf.* Vol. V. page 2) at five weeks old they have assumed the adult plumage.

D. SETH-SMITH.

NOTES ON SOME BIRDS OF THE WHITE NILE.

By Mrs. A. C. CHARRINGTON.

Leaving England on the 19th of last December, we went by way of Cairo, Assuan, Wady Halfa, to Khartoum. There we found a Government steamer, the "Dal," which was to start in a few days for Gondokoro, the farthest navigable port on the White Nile, and some 1,200 miles farther south.

In the Palace Gardens at Khartoum I made my first acquaintance with the Whale-headed Stork (*Balæniceps rex*) a quaint bird with an extraordinary *mouth* which positively smiles at times. The bird at the Palace has a Sudanese boy as attendant, who feeds him with small fish, and if he does not swallow them fast enough gently strokes down his neck with anxious care! The colour of this bird is a slate grey, as in a Heron.

The "Dal," on which we started, January 15th, is the same boat on which Lord Kitchener went to Fashoda during the Colonel Marchand incident in 1898. In a barge alongside we had goats for milk, poultry, and fourteen donkeys, the property of Major Harrison, who was going shooting in the interior.

Two days south of Khartoum Ducks and Geese of many kinds abounded, the latter mostly Spurwing (*a*). At Kawa Major Harrison brought in a beautiful Roller with deep blue and cobalt wings, soft blue grey head, and fawn back (*b*); also a chestnut and black Whydah (*c*) with long hair-like tail-feathers terminating in a spatule, also some small species of Hornbill. Major Harrison was clever at skinning, and this gave me opportunities of seeing many birds which would not have occurred otherwise; as he was collecting for a museum.

The banks were dotted with beautiful water birds: Crowned Cranes (the latter very tame and strolling along in a most dignified way), Demoiselle Cranes, large and small White Herons, a Grey Heron (?), Buff-backed Heron, and dense flocks of Spurwing or Egyptian Geese; in places a Whistling Teal (*d*), and a large brown and black duck (?) were in densely packed

(a). *Plectopterus rüppelli*.

(b). *Coracias garrulus*.

(c). *Steganura paradisea*.

(d). *Dendrocygna viduata*.

masses of several thousands, and rose lazily, flying a few hundred yards as the steamer came up with them; Sandpipers and Curlews also abounded.

At Goz-abu-Guma the shallow water near the banks was studded with large white water lilies, on and about which were Coot-like birds with very long toes: Jacanas. A Darter was added to the specimens on board, a curious Cormorant-like bird that swims under water with only its head and neck out: towards evening they gather in groups on the Ambatch bushes, and stand immovable with wings outstretched as if to dry them in the air. Beyond Renk, 280 miles south, the banks are fringed with reeds and bushes which are hung thickly with Weaver-birds' nests. A very brilliant vermilion and black Shrike was shot here (*e*).

About here we saw the most beautiful birds I think it possible to imagine, called by Soudan residents the Ruby-throated Bee-eater (*f*). I cannot find it mentioned in any bird book. It is almost impossible to describe: a flash of pure rose colour, bronze, dull red, and turquoise blue, changing and shimmering with every movement, hovering over the reeds like a dragon-fly, and every now and then settling for an instant on a head of feathery papyrus. A Green Bee-eater is also plentiful along the river, feeding on the insects that swarm towards evening: one sees them in numbers where grass has been recently burnt. The colour fades very quickly after death.

On January 21st we reached Tewfikieh, one of Sir Samuel Baker's old stations, and walking along the shore I found Cordon Bleus nesting in a yellow flowered mimosa. Spice-birds and a glossy black bird, four or five together, like small Magpies, with long waving tail feathers (*g*).

Major Harrison shot a large Pigeon, the size of a Wood Pigeon. Breast steel grey, back warm vinous fawn, wings fawn, shot with plum or iridescent green, flight feathers edged white, distinct hackles fawn and grey, head grey, with fleshy eye ceres bright red, an inch long and half an inch wide; eye yellow (*h*).

(*e*). *Laniarius erythrogaster*.

(*f*). *Merops nubicus*.

(*g*). Drongo Shrikes.

(*h*). The Guinea Dove, *Columba guinea*.

Near the Sobat, which joins the Nile near Tewfikieh, we steamed through a small flock of Pelicans which were almost too lazy to get out of our way.

On January 24th we arrived at a place where the Nile divides into the Bahr el Gebel and Bahr el Ghazal. We followed the first river, and soon came to the district where the river loses itself in immense marshes 40,000 square miles in extent.

The steamer threads its way through a series of lagoons for about 25 miles, when the river again becomes visible. The real river bed is being searched for, and cleansed of sudd, (a vegetable block of papyrus and tall weedy grass), by two English naval officers and a large number of natives working under them. They invited us to join them on their gunboat for the day, and we went through the newly-cleared channel with them. The last few miles is not clear, and we had to charge several times at the masses of floating sudd before it gave way, and was pushed aside, or steamed over by our powerful stern wheeler. During the day we saw many beautiful water birds, Brown and Black Waders (*j*). Two kinds of Black and White Kingfishers Pratincoles, and, most curious of all to see in Central Africa, countless numbers of Terns, or Sea Swallows.

I saw one bird very like *Balæniceps*, but there is another big-headed Stork in these parts. The bird I saw was flying, and Storks are then hard to distinguish (*k*). There seemed to be four kinds of Ibis, black, white, black-and-white, and a beautiful kind, white with just the edges of its wings black (*l*).

Some days after this while strolling on the banks while the steamer was taking in wood for fuel, I saw Firefinches and many Weavers. Nearly every tree had a pair of Fish Eagles nesting on it. One shot and brought on board measured 6ft. between the points of the outstretched wings (*m*).

At Lado one touches Congo Free State territory, and the Belgian Commandant, who is a great collector of birds, gave me a pair of small Parrots, which I afterwards ascertained to be

(*j*). Open-billed Storks, *Anastomus lamelligerus*.

(*k*). The Senegal Tabiru or Saddlebill, *Ephippiorhynchus senegalensis*.

(*l*). The Sacred Ibis.

(*m*). *Haliaetus vocifer*.

Meyer's Parrot. I have got them safely home and hope they will nest. As I write this they are moulting hard but are otherwise very healthy. At Gondokoro, our farthest point, and the first military station in Uganda, I saw very few birds. Spice-birds nested in the thatch of the houses, and I saw one or two Glossy Starlings. Returning down the river one sees much the same kinds of birds. At Mongalla a pair of Yellow Wagtails had a nest in the river bank close to my cabin window.

One evening as I was writing in the deck cabin, a bird flew in, attracted I suppose by the light, and I caught it. It was a beautiful Kingfisher, not larger than a Sparrow, chiefly golden bronze in colour with a vermilion beak and a patch of bright cobalt blue round and behind each eye (*n*). I put it in a cage for the night, meaning to study the colours by day, but it escaped through the bars of a primitive native cage. At a place about 12 miles up the Sobat, where we steamed to deliver mails to the American Mission, we saw five or six immense black and white Storks with bright red beaks (*o*). Close to them was a flock of about fifty Guinea-fowl, much darker and richer in colour than ours (*p*). The latter furnished a welcome change to our menu. At one village we saw two half-tamed Ostriches kept for their feathers.

At Gebel-Ain, 220 miles south of Khartoum, I saw several pairs of birds which I cannot be certain were Doves or Parroquets. I never could get very near them. They seemed to fly about in pairs, the flight being like Budgerigars. The general impression of colour was chocolate and black, with very round bullet heads and curved beaks and long tail feathers (*r*).

Here too we got a beautiful Glossy Starling with yellow eyes (*s*). It was wounded and I hoped to save its life, but could not.

[We are indebted to Mr. Meade-Waldo for having kindly gone through this interesting article and identified the birds so well described by Mrs. Charrington.—ED.]

(*n*). Ceyx ?

(*p*). *Numida philonorhynca*.

(*o*). The Saddle-bill Stork.

(*r*). The Blue-naped Coly, *Colius macrurus*.

(*s*). *Lamprotornis porphyropterus*.

CHARACTERS IN BIRDS' WINGS.

By Dr. A. G. BUTLER.

My attention has again been called to this important point by my friend Mr. F. W. Frohawk's interesting article on the sexual characters of the Lapwing ('Ibis,' Vol. IV., pp. 446-451). As is well known to many of our Members, I have written articles on the sexual differences exhibited in the wings of birds both in 'The Zoologist' and in our Magazine.

As I have already suggested, every Museum should make a collection of the expanded wings of all birds, in addition to the collection of skins; not only to enable the systematic Ornithologist to see, at a glance, all sexual characters, and all important generic differences which an open wing brings to light; but to enable him to describe his birds correctly.

A short time since, I lost a fine example of the Brambling (*Fringilla montifringilla* ♂); and, as I did not require the skin, I cut off and mounted the wings. On comparing these with the description of the Brambling in the Museum 'Catalogue of Birds,' I at once noticed inaccuracies, which perhaps could hardly be avoided by anyone describing from skins alone, but which could not have crept into any description if open wings had been available for comparison.

I should describe the wing as follows:—Scapularies and lesser coverts bright tawny sienna; median coverts white, all the outer ones more or less washed with tawny; greater coverts black, the inner web somewhat greyer, the first tipped with white, the second with white slightly washed with tawny, the latter colour gradually increasing in depth of tint and width to the ninth, when the inner web becomes white-tipped; bastard wing black externally, dark brown internally; primary coverts dark brown; quills with more or less black outer webs, black shafts, and greyer inner webs; bastard primary quite as well developed as in the House-Sparrow (*Passer domesticus*); second primary with narrow white edge to outer web; remaining primaries with this edging more or less interrupted and partly brimstone yellow; the fifth to the tenth with a conspicuous elongated white patch on outer web,

washed in front with sulphur yellow; third to fifth primaries emarginate in front towards their extremities; second and third primaries with ashy borders to inner webs excepting towards the tips, the fourth to tenth with broad white borders to inner webs: anterior secondaries with a tapering marginal white streak towards extremities on outer web; this streak becomes gradually more tawny and encircles the tips in the posterior secondaries; in continuation of the elongate white patches on the outer webs of the primaries, the secondaries show cuneiform white patches faintly stained in front with tawny; the narrow white and sulphur edging to the outer webs in the primaries is represented on the anterior secondaries by a broader (and shorter) streak, which increases in width and gradually becomes tawny on the inner secondaries, encircling the tips of the last three; the first six secondaries have broad white borders to the inner webs excepting towards their extremities. Wings below grey, with white inner borders to the flights; under wing-coverts whitish, becoming yellow at base of wing.

I think it will be admitted that in the dried skin it would be hopeless to attempt to describe all these details; and therefore once more I would urge upon our elder brothers—the systematists, to delay no longer in adding as complete a series as possible of sexed mounted wings to the collections under their charge. I am quite sure, if they will do this, that many unsuspected characters of importance will be brought to light, which will be of assistance to them in their studies; I am equally certain that it will enable them to distinguish with ease the sexes of many species which have hitherto been doubtfully or even incorrectly determined by collectors and taxidermists.

Of course, in comparing some species, such as the *Duulin*, in which the wings of male and female are almost uniform in size and structure, the weight and size of the bodies must not be overlooked; the male, with its smaller body but equally large wings has a great advantage over the female when flying.

THE REARING OF THE SANDPIPER.

• By the Rev. C. D. FARRAR.

To know just how good brandy is in a mince pie, you must be a Protectionist. I suppose the zest of anything depends on the deprivation if not on the prohibition. I remember that a great traveller once said to me, that the much vaunted cataract of the Ganges was a poverty stricken puddle, but that in a country where there is no water, a puddle looked like an inundation. It is much the same with me at present. Having parted with all my rare birds, I am for the present compelled to make the most of what we will call the less rare.

For some odd reason chances do not come readily to those who greatly desire them; therefore it is no wonder that when they do, we behave as though we were singing the song of Hannah. I had much her feeling of exultation when one summer afternoon in early July, I secured my family of Sandpipers.

They were "bred and born," as Brer Rabbit was so fond of saying, on the banks of the Aire, but far far away from smoky Leeds, and I fancy that when I have related all the circumstances of their up-bringing the Council will feel that in very admiration they are bound to make an exception in this case and award me a Medal!

When discovered the little Sandpipers were barely out of the egg shell. In fact they were not dry, and so tiny were they that they looked like big bumble bees on legs. So feeble was the spark of life that they had to be warmed in the kitchen oven, or what Shakspeare calls :

"The vital spark of heavenly flame"

would have very quickly disappeared. There were three of the little beauties and the mother also came to me, but we will not say how. To have taken the babies and left the mother would have been not only gross cruelty, but madness; and I was going to run no risks.

Whether my walk or their lives would end first, was for a time a very nice problem. Fortunately, I managed to *get them to*

the fire, though not in quite the same sense as Crammer once used the expression. As I watched the poor little flicker of life, I must confess that I felt a tightening of the heart and throat, the sensation produced on some people by sacred music or the shimmer of moonlight on the sea.

Presently beneath the grateful warmth, I could hear the feeblest of feeble little pipes—Peep—Peep—Peep continually repeated. For a long time life was at so low an ebb that they could not stand.

As soon as I got home, I put them into one of my small aviaries with their gentle little mother. It was the prettiest sight in the world to see her call them and to watch them snuggle under her just like little chickens do under a hen. She seemed to know no fear, and might have been used to see a six foot parson standing over her all her life. This is all the more wonderful if we remember what a shy and timid bird the Sandpiper is. Perhaps she was of the same opinion as one of my miners, for he once said to me quite seriously, "Eh, Mester Farrar, but if ye nobbut seed two cocks a fightin on t' road, yer heart 'd tak part wi one o' them."

My heart certainly did go out to the brave little hen, as she looked so sweet and confiding, with her soft brown eyes fixed on me, as much as to say, I know you will see me and my babies through this bit of bother. I had my doubts as to how to go to work, but some doubts are like dirty water, let them alone and they will evaporate. It was so in the present case. Had I not reared other tender birds; why then should I be beaten by a nest of Sandpipers?

Still the magnitude of the task, as Mrs. Nickleby said on another historic occasion—came upon me like a flash of fire and almost froze my blood.

I knew very little about Sandpipers and their "little Marys," but I judged that they would probably live on little fresh water shrimps and such small deer as abide beside running waters.

It was clear, however, that I could not get shrimps at

Micklefield, and the "pink un's" from Scarboro' would scarcely do.

I felt that the only thing was to try various likely dainties. The common or garden worm was an obvious thought. Away I went and dug for dear life; but as the ground was as hard as a brick-bat, or shall we say—the heart of a brother aviculturist—the yield was not encouraging. I hurried back with what food I could get, and laid them down with some ceremony before the family. An Alderman at a City feast, if offered rice pudding in place of rich Turtle, could not have looked more disdainful. They simply did to the worms what the Israelites did to Jericho—they trod them under foot. Here was a nice predicament. Mealworms might do, but where was I to get mealworms to feed a family of hungry Sandpipers in July? Only a week before I had bought a quart at ten shillings, and was told plaintively that "they was getting wery scarce." At the price Sandpipers would soon literally be worth their weight in gold.

A buzzing bluebottle suggested the humble but succulent maggot. I had a few. I humbly placed some on a saucer and turned away my head. When I looked again a moment later, they were gone completely, and the little Sandpipers were like David Copperfield "plainly asking for more." More I could not give them for my supply was very limited. I set about therefore and made them some food of my own, on the off chance that they would take to it. Failing this, I determined to give them their liberty, sooner than see them die before my eyes. To my intense surprise they took to it most kindly, and when I went to look at them in the morning, instead of finding them all dead corpses, I found as merry a party of Sandpipers as ever you saw.

The soft peep, peep, peep, never ceased for many days. I suppose it is by the voice that they keep in touch with each other when at liberty. After each feed they regularly ran back to their mother for warmth, comfort, and forty winks.

For a few days the wire divisions seemed to puzzle them, and they used to roam up and down as restlessly as some of the beasts do at the Zoo.

For some days they were covered all over with soft hair like down and long filamentous particles where their tails would one day be.

It was not for about a fortnight that they began to feather, and it is only now at about two months old that they are beginning to resemble the old bird. The sexes are easy to tell, as the cock has a much whiter waistcoat than the hen. They have long been able to fend for themselves.

As they are Waders, I provided them with a small "Lake," made out of a disused scullery sink, and all day long they are about in it, looking for imaginary prey. They love to bathe, and when engaged in their tub they have a curious habit of lashing the water up with their sterns.

I do not think they would hurt a healthy bluebottle, unless perchance they ate him, but they have a habit of running up to a bird with their necks stretched out very stiffly and seizing him by a wing. The small bird merely looks at them disdainfully and hops away, as much as to say "What the dickens are you trying to do?"

They are the prettiest and daintiest little birds imaginable, with their soft brownish grey plumage; snowy waistcoats and long aristocratic looking legs, quite reminding me of some of our best County families!

I love to see them moving about in a manner at once indicative of quiet security and an untroubled conscience. They only get maggots about twice a week now, and the other inmates of the aviary have to be pretty spry to get any.*

We would especially urge members to send in accounts of their breeding results during the present summer, and we would also remind them that any notes on rare birds are at all times most acceptable. No member need be afraid to write if he or she has anything of interest to communicate.

* I gave the Sandpipers their liberty to-night, August 17th, on our "Cars" or water meadows, not wishing to keep them all the Winter.—C. D. F.

GRAY'S BARE-THROATED FRANCOLIN.

Pternistes leucosepus.

By L. M. SETH-SMITH, B.A., M.B.O.U.

The African genus *Pternistes*, of which there are nine species, is characterised by the curious throat being entirely devoid of feathers; also the bare patch round the eye is large and conspicuous.

Seven of the species have the feathers of the back and scapulars with dark brown or black shaft-stripes, while the remaining two have the same feathers with white shaft-stripes.

The subject of this article is one of the latter class and inhabits North-East Africa, Abyssinia, and North Somaliland; the other, *P. infuscalus*, being a more southern representative, and inhabiting East Africa from Mamboia northwards to Kilimanjaro and Southern Somaliland.

Mr. Ogilvie-Grant thinks it probable that the two forms intergrade in Somaliland.

At the beginning of March, Mr. F. C. Thorpe, the well known Hull bird dealer, sent me on approval a male and two female "Abyssinian Francolins," which were in such splendid condition, and such fine birds altogether, that I bought them, although I had been told that Francolins are fearful screechers.

The plumage of the sexes is similar and the feathers being white with brown margins, give the birds a very speckly appearance.

The skin round the eye is bright red and very conspicuous, and that on the neck light orange. In spite of the plumage being similar, the sexes can be easily distinguished by the male being considerably larger than the female and having a pair of sharp spurs, sometimes supplemented by a second blunted pair.

As soon as I obtained my birds I put them into an outdoor aviary with some evergreen cover, of which they took full advantage, being very shy. I planted turf also to give them more cover later on, but they would not allow it to grow, eating every green bit off. They were fed almost entirely on malee,

which, though I believe usually very fattening, does not seem to have hurt them in the least, which I attribute to the fact of their having a good deal of room and being very active, continually running backwards and forwards.

They are extremely fond of worms and scratch the earth and grass up a good deal in their search for them.

Although living outside almost altogether, they had access to a wooden shed with plenty of dry sand in which they delighted to dust themselves. At first they agreed well together, but about the beginning of April I noticed that the hens always kept to their run on one side of the aviary, while the cock had his on the other side and was very savage if the hens trespassed, driving them away immediately. Towards the end of the month they seemed to get on better however, but still there was no grass and only a few nettles. In the next compartment, however, in which were some Rain Quails, there was a fine crop of nettles, and so, on the 30th, I changed them round, putting the Francolins into the run with nettles two feet high and the Quails into the other. They seemed to like the change and very soon I saw the cock coming through the nettles with wings drooped and face inflated, showing off to one of the hens.

On May 7th I found an egg laid in a comparatively deep hollow under some fir branches. There were a few pieces of grass in and about the nest, but it could not be called a lining.

The egg looks at first glance a sort of dirty white all over, but on examining it more closely it is found to be minutely speckled with chalky-white. The crow of the cock has been compared, not altogether inaptly, to the bray of a donkey: to me it is not an objectionable sound. It has also several softer guttural notes. But hard indeed is the aviculturist's lot! just when things seem at their best and hopes are highest there comes a blow.

The next day, May 8th, the hen was found to be egg-bound. The miserably cold weather probably accounted for it, but still I do not fancy it is common for so large a bird to be egg-bound. I immediately took her into a warm kitchen and

treated her, and about eight hours afterwards she laid a thin-shelled egg, and immediately after that was quite well again.

[My brother left England for Uganda early in June and asked me to look at his Francolins whenever I was in the neighbourhood. I fear, however, there is not much to add to the above notes. The hen that was egg-bound suffered from the same complaint on two occasions later and was then removed to another compartment.

On the 16th of July, in peeping through the wire I noticed a batch of five eggs in a "scratch" under some branches in a corner of the aviary, these having been laid by the second hen. I did not see them again until the 7th of August, when there were seven cold eggs in the nest, on which the hen had apparently never attempted to sit. As they looked perfectly good I decided to take them and attempt to hatch them in an incubator. I fear, however, that having lain so long unturned in the nest, there will be little chance of their hatching.

D. SETH-SMITH.]

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

Additions during the month of July 1904:

JULY	1.	1	Leadbeater's Cockatoo (<i>Cacatua leadbeateri</i>).	..	Australia.
"	2.	1	Vulturine Eagle (<i>Aquila verreauxi</i>).	..	S. Africa.
"	3.	2	Ortolan Buntings (<i>Emberiza hortulana</i>).	..	Europe.
"	5.	3	Crested Screammers (<i>Chauna cristata</i>).	..	(Argentina).
"	5.	1	Emu (<i>Dromæus novæ-hollandiæ</i>) ♂.	..	Australia.
"	5.	2	Egyptian Geese (<i>Chenalopex ægyptiacus</i>).	..	N. Africa.
"	5.	1	Common Buzzard (<i>Buteo vulgaris</i>).	..	Europe.
"	7.	5	Upland Geese (<i>Chloëphaga magellanica</i>).	..	(Patagonia).
"	8.	2	Spur-winged Geese (<i>Plectropterus gambensis</i>).	..	W. Africa.
"	8.	1	Angolan Vulture (<i>Gypohierax angolensis</i>).	..	Africa.
"	8.	1	Short-eared Owl (<i>Asio brachyotus</i>).	..	Europe.
"	8.	2	Grey-headed Love-birds (<i>Agapornis cana</i>).	..	Madagascar.
"	8.	1	Great-billed Andaman Parrakeet (<i>Palæornis magnirostris</i>).	..	Andaman Is.
"	9.	3	Hobbies (<i>Falco subbuteo</i>).	..	British Isles.

JULY 11.	1	Common Cormorant (<i>Phalacrocorax carbo</i>).	..	Europe.
„	11.	2 Little Ringed Plovers (<i>Ægialitis curonica</i>).	..	„
„	12.	4 Herring Gulls (<i>Larus argentatus</i>).	..	„
„	12.	2 Greater Black-backed Gulls (<i>Larus marinus</i>).	..	„
„	13.	3 Lettered Aracaris (<i>Pteroglossus inscriptus</i>).	..	Brazil.
„	14.	1 Ostrich (<i>Struthio camelus</i>) ♂.		Gambia, W. Africa.
„	14.	3 Levaillant's Parrots (<i>Pœocephalus robustus</i>).	„	„
„	14.	1 Brown-throated Conure (<i>Conurus æruginosus</i>).		S. America.
„	14.	2 Hybrid Rheas (between <i>Rhea americana</i> and <i>Rhea darwini</i>).		„
„	14.	4 Purple Herons (<i>Ardea purpurea</i>).	..	Europe.
„	15.	10 Glossy Ibises (<i>Plegadis falcinellus</i>).	..	„
„	15.	1 Red-vented Parrot (<i>Pionus menstruus</i>).	..	S. America.
„	15.	1 Eupatorian Parrakeet (<i>Palæornis eupatria</i>) ♀.	..	India.
„	15.	1 Calandra Lark (<i>Melanocorypha calandra</i>).	..	Europe.
„	15.	2 Yellow-bellied Liothrix (<i>Liothrix luteus</i>).	..	China.
„	15.	3 Common Kestrels (<i>Tinnunculus alaudarius</i>).	..	British Isles.
„	18.	2 Crowned Cranes (<i>Balearica pavonina</i>).	..	White Nile.
„	20.	1 Musky Lorikeet (<i>Glossopsittacus concinnus</i>).	..	Australia.
„	20.	1 Swainson's Lorikeet (<i>Trichoglossus novæ—hollandiæ</i>).		„
„	20.	1 Ornamental Lorikeet (<i>Trichoglossus ornatus</i>).	..	„
„	20.	1 Black-bellied Weaver-bird (<i>Euplectes afer</i>) ♂.	..	W. Africa.
„	21.	1 Great Eagle Owl (<i>Bubo maximus</i>).	..	Europe.
„	21.	1 Barn-Owl (<i>Strix flammea</i>).	..	British Isles.
„	21.	4 Shoveller Ducks (<i>Spatula clypeata</i>).	..	Europe.
„	22.	1 Blue-fronted Amazon (<i>Chrysotis æstiva</i>).	..	S. America.
„	23.	1 Brazilian Tanager (<i>Ramphocælus brasilius</i>) ♂.	..	Brazil.
„	23.	1 Blue-shouldered Tanager (<i>Tanagra cyanoptera</i>).		„
„	23.	1 Yellow-crowned Penguin (<i>Eudyptes antipodum</i>).		New Zealand.
„	23.	2 Rock-hopper Penguins (<i>Eudyptes chrysocome</i>).		Patagonia.
„	25.	2 Glossy Ibises (<i>Plegadis falcinellus</i>).	..	(Europe).
„	26.	1 Cormorant (<i>Phalacrocorax carbo</i>).	..	Europe.
„	26.	1 Crowned Crane (<i>Balearica pavonina</i>).	..	W. Africa.
„	26.	1 Ring-necked Parrakeet (<i>Palæornis torquata</i>).		India.
„	27.	1 Black-breasted Peewit (<i>Sarciophorus pectoralis</i>).		Australia.
„	27.	2 Ural Owls (dark var.) (<i>Syrnium uralense</i>).	..	N. Europe.
„	27.	6 Scops Owls (<i>Scops giu</i>).	..	S. Europe.
„	27.	2 Naked-footed Owlets (<i>Athene noctua</i>).	..	Europe.
„	27.	2 Golden-crowned Conures (<i>Conurus aureus</i>).	..	S. E. Brazil.
„	28.	1 Greater Sulphur-crested Cockatoo (<i>Cacatua galerita</i>).		Australia.

The three examples of Levaillant's Parrot (*Pœocephalus*

robustus) received on the 14th of July are noteworthy additions to the collection, for the species is very rarely imported, and has not been represented at the Gardens for many years. It inhabits South Africa but is a rare and local species.

The pair of Tickell's Ouzels (*Merula unicolor*) presented to the Society by Mr. Harper in 1900 have nested in the new Pheasantry. Three young were hatched but one died; the other two are doing well, and at the present moment (Aug. 20th) are just about leaving the nest. The species inhabits the Himalayas during the breeding season, and descends to the plains of India during the Winter months. The pair at the Zoo. are probably the only ones ever brought alive to this country, and the fact of their breeding in the Gardens is a matter for congratulation.

The breeding season at the Zoo. may now be said to be about over, and, so far as the birds are concerned, it has been one of the most successful seasons on record. The credit for this must go primarily to Mr. Bertling, the Head Keeper, who has had especial charge of the birds.—D. S.-S.

WEKA RAILS BREEDING IN CAPTIVITY.

The partial success of Mr. Blaauw in rearing young of the Weka Rail (*Ocydromus australis*) in his Park at Gooilust in Holland was referred to at page 277. Since the publication of his notes on the subject in the *Proceedings of the Zoological Society* (March, 1899) he has attained complete success, and we are indebted to him for a copy of a paper read at the Zoological Congress in Berlin in August 1901.

The pair of Wekas had been kept for some years in the open, in an enclosure with growing plants. In the spring of 1900 they made a large nest of all kinds of vegetation, under a beech tree, and both birds sat in turns on the three eggs, which were whitish, spotted, and streaked with red.

On June 8th, after twenty-eight days incubation, young

birds were observed. These, two in number, were an almost uniform chocolate brown, with black eyes and beak and reddish legs and feet, and they were carefully fed and looked after by their parents.

On the first day the young remained in the nest, but on the second they began to follow the adults, who diligently searched for food, which consisted of all kinds of worms and insects. At first the whole family remained under the cover of overhanging plants, but later they went more and more into the open, and at length both old and young would run fearlessly out when food was brought.

When the young birds were about a fortnight old the legs began to grow very long, so that their small bodies were carried remarkably high. Provision was thus made for rapid movement at an early age. When about five weeks old the legs of the young birds began to get yellowish, and soon became so altogether. Feathers now appeared on the shoulders and sides, and as no trace of a tail was yet visible they bore a superficial resemblance to the Apteryx.

By July 26th they were fully fledged, although the feathers were still short, and the legs became a dark red, the colour being however still mixed with black. The bill was still black and short, but it soon increased in length and became brightly coloured, and in a short time the birds were fully grown.

The first plumage is similar to that of the adult; but the black marks are less clearly defined, and the general colour is darker.

Mr. Blaauw found the Wekas very tame, intelligent and hardy, and possessing one fault only, namely, that they will kill whatever they can master; on one occasion even killing a young Rhea. However with an enclosure to themselves this bad characteristic need not be taken into consideration.

CORRESPONDENCE, NOTES, ETC.

MELANISM IN GOULDIAN FINCHES.

SIR,—In 1902 Dr. Butler wrote to *The Ibis* describing a very curiously marked specimen of Gouldian Finch. At the present time there is a live specimen at the Regent's Park Zoo. very like the one he mentioned. The keeper (Insect House) tells me it is one of five which arrived in October last in their grey nestling plumage, and that it has quite recently moulted into the present colouring.

WILLIAM INGRAM.

SIR,—The accompanying letter from Sir Wm. Ingram, Bart., is I think of interest. My bird only acquired its deep colouring gradually, during the last three or four years of its life; but the specimen now at the Zoo. has assumed it as its first adult plumage.

It seems possible that such excess of pigmentation may be due to unusual vigour resulting from a succession of unrelated marriages in this bird's ancestry.

A. G. BUTLER.

[Is it not more likely a result of high feeding and practically no exercise?—ED.]

THE "LAUGHING OWL," OF NEW ZEALAND.

(*Sceloglaux albifacies*).

Letter received by a member from a taxidermist in Dunedin, N. Z.

To get live Owls is a much rarer thing than you are aware of. A pair were sold a few years ago to a gentleman in England for £100. The pair I have could not be sold under £50. This bird is rapidly becoming extinct, as the country is getting settled very fast. It cannot stand being disturbed, and its food, rats, mice, etc. are getting scarce since stoats and weasels were introduced. All the sheep farmers set fire to the native tussock grass, then the ferrets, stoats, and weasels do the rest.

These birds have been in confinement for about five years, and have laid each year. They were taken from the nest and are so tame that they will allow themselves to be stroked, although they seem not to care for such attentions. They are fed on steak, sheep's heart, or any meat not too tough. In all cases I chop up the meat in small bits, and about twice a-week I give a little bit of sheep's liver and lung. I have tried them with birds, rats, and mice, but if I put in the usual little dish of chopped meat they will never touch the others. They will eat almost any kind of tender meat. I give them fresh meat every evening, and a large pie-dish of water: they are fond of bathing, and cannot do without it.

In the southern part of N. Z. they inhabit the wild rocky sides of hills where there is plenty of frost and snow in winter; here there are many

winters without snow, and as a rule the frost disappears by eleven o'clock, but there is a good deal of cold wind.

They are housed in a very large packing-case, and inside there is a small box where they stay all day or run into if disturbed in the evening.

We have got a small Owl here about half the size of the other, say twice as big as a Blackbird; it is called the Morepork, which it calls out on moonlight nights pretty plainly. It inhabits large trees so overgrown with creepers that it is difficult to get its nest. It is not nearly so scarce as the other. I think a pair might be got for £20, but it might take a year or more to procure them. The Morepork is a great mouser, and eats moths and such like: it is hardy in confinement and any kind of meat that is not tough will do.

Both these Owls are a tawny brown. The large Owl has black eyes, and the small one bright orange-yellow. In any good museum library you can see in Buller's book (2nd edition, Vol. II.) a good cut and description of both.

(Signed) W. SMYTH.

SINGING-FINCHES BREEDING.

SIR,—Referring to Miss Merrylees letter, I find the Grey Singing-finch most easy to breed in a large aviary, and the young are reared without any trouble. I notice that when the birds have young they pick the green food over very frequently. I supply large bundles of flowering grass, shepherd's purse, plantain (rats' tails), lettuce, chickweed, groundsel, and any plant or shoot from rose or fruit-trees that is infested with blight.

The Grey and Green Singing-finches I find cross very readily, the young taking after the Grey, but generally shewing the dark cheek-mark of the Green; they are excellent singers. Are these cross-bred birds likely to be fertile?

F. H. RUDKIN.

THE DIAMOND DOVE.

Geopelia cuneata.

These beautiful and graceful little Doves do extremely well in outdoor aviaries in which there is plenty of cover in the shape of growing fir trees and bushes or bundles of thick brushwood. In my own aviary nest after nest is built and the young are reared without the slightest difficulty. The nest is placed generally from five to ten feet from the ground, and is made of very fine twigs and bents. It is difficult to say exactly how many young have been reared this year, but I think ten or twelve. In the winter the Diamond Doves certainly need warmth; the cold seems to paralyze them, especially the hens, and I used generally to lose several before I had my aviaries properly warmed in winter.

D. SETH-SMITH.

THE INDIAN GREEN-WINGED DOVE.

Chalcophaps indica.

The breeding of this handsome species in captivity being, I believe, a somewhat rare event, it may perhaps be worth while recording the rearing of two pairs of "squeakers" in my aviary. The hen is a very old bird that was given to me about two years ago by my friend Mr. B. Thomasset. She had laid eggs while in his possession. Last summer (1903) I obtained a mate for her—a very perfect and beautiful bird,—and she wanted to nest at once. The new bird, however, was very shy at first, though he soon got tamer. In the late autumn they nested, but failed to rear the young. In the spring of the present year they went to nest again, and successfully reared a pair which are now nearly as fine as their parents. A second pair of squabs left the nest on August 11th and are doing well.

The young birds are very small when they leave the nest, though they fly well. The first time I saw one, perched on a branch of plum tree, I could hardly make out what it was, as I did not expect to see the young Greenwings out so soon. Although the wings were fully feathered the head was almost naked, and it looked a most peculiar little creature. The plumage of the young is very interesting, and very different from that of the adults. The feathers are very dark brown—almost black—broadly tipped with reddish brown. Even in the nest however a few green feathers are visible on the back and wings. The change to the adult plumage takes place gradually, though somewhat rapidly, but in the first adult stage the plumage is not so bright as in the old birds. Probably they wait until the following spring for the brilliancy of maturity. I may mention that the egg of this species is distinctly cream-coloured, not white.

D. SETH-SMITH.

 WHOOPER SWANS NESTING IN CAPTIVITY.

SIR,—I think it may be of some interest to the readers of the *Avicultural Magazine* to know that we have had a pair of Whooper Swans (*Cygnus ferus*), pinioned, on the lake here since the Spring of 1903. They nested this Spring—began to sit on April 25th, and on June 6th hatched four young ones. About three days after three of them were found dead; it is believed they got lost from the old birds who had been fighting, and died of starvation—the remaining cygnet is thriving.

F. HAREWOOD.

 OFFICERS FOR THE YEAR 1904-5.

In accordance with Rule 8 (as amended June 1904) the Council recommend that Messrs. E. G. B. Meade-Waldo and Russell Humphrys retire from the Council for the year 1904-5, and that Miss D. Hamilton and Mr. Bernard C. Thomasset be elected in their stead. Also that Mr. Russell Humphrys be elected as Auditor and Mr. Nicholas S. O'Reilly as Scrutineer.

THE ILLUSTRATION FUND.

Mr. Russell Humphrys and Mr. Trevor-Battye have each kindly given a donation of one guinea, and Mr. P. Peir (of Sydney) five shillings, towards the above fund. This brings the total amount received to August 24th, up to £28 ros. 6d.

POST MORTEM EXAMINATIONS.

GOULDIAN FINCH, cock (Mr. W. F. Moore). Appeared ill some days. A gathering like a blister was found on the left side of neck. This was pricked and an oily fluid pressed out. It seemed better and was replaced in a flight cage, but it died during the afternoon. Food consisted of canary, millet, a mealworm occasionally, greenfood and softbillo once a week. [Your bird suffered from a cyst on the side of the neck, but this did not involve any important structures and had nothing to do with its death. It suffered from fatty degeneration of the liver, which was the cause of death].

BENGALÉE (Mrs. Sherston). Had been rather puffy for a little time, but sang and seemed all right. Noticed the upper mandible was overgrown; would that prevent the proper cracking of seed? The bird seems well-nourished, but it might have swallowed seed whole, and died of indigestion. [The upper mandible was overgrown, but the seed in the crop was properly cracked. It died of inflammation of the liver].

ROSELLA PARRAKEET, hen (Mr. D. Parker). Only seemed to be ill two or three days, sitting moping on the seed-pan. Kept in a good-sized aviary in company with another Rosella and two Redrumps. Food consisted of hemp, millet, and canary seed. They had been in the aviary about six weeks. [The bird died of inflammation of the bowels, in my opinion brought on by chill. I should be inclined to add to the food you now give, wheat, dari, and oats, and do not give too much hemp. Many thanks for P. O. 2/6].

BUDGERIGAR (Mrs. Williams). [Your bird died of concussion of brain].

ORANGE-CHEEKED WAXBILL, (Mrs. Noble). No symptoms. [Death was due to acute pneumonia].

ST. HELENA WAXBILL and **ORANGE-CHEEKED WAXBILL**, (Mrs. E. Mellor). [The St. Helena died of concussion of the brain, and the Orange-cheeked of inflammation of the bowels. Be careful with the green food].

NONPAREIL, cock (Mrs. Tomes). Found dead. [Apoplexy. There was a large blood extravasation over the left side of brain].

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SALTER, Thame.

III.

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Mr. ROBERT L. GUNTHER ; Park Wood, Englefield Green, Surrey.
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(Continued on opposite page).

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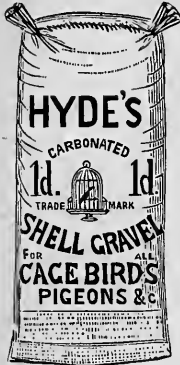
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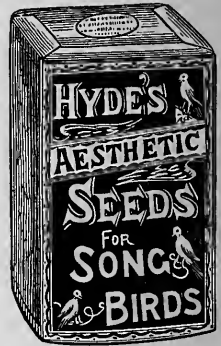
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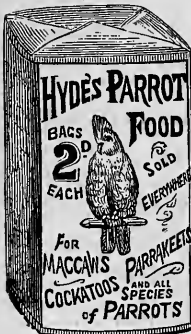


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'Summer is coming, summer is coming,
I know it, I know it, I know it.'

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SALTATOR AURANTIROSTRIS.

Avicultural Magazine,

BEING THE JOURNAL OF THE

AVICULTURAL SOCIETY.

New Series.—VOL. II.—NO. 12.—*All rights reserved.*

OCTOBER, 1904.

THE ORANGE-BILLED TANAGER.

Saltator aurantiirostris.

By ARTHUR G. BUTLER, Ph.D., etc.

This, one of the largest but most sombrely coloured of the *Tanagridæ*, is an inhabitant of Paraguay, Uruguay, and the northern and western portions of the Argentine Republic. Of the few examples which have from time to time come into the English bird-market, it is tolerably certain that all must have been imported from Argentina; and that, previous to the creation of our Society, these few found their way to the Zoological Gardens of this country.

The Orange-billed Tanager appears to breed late in the year; d'Orbigny having found it in Corrientes nesting in November. Being a confiding species for a Tanager, it constructs its untidy open nest of roots in the vicinity of human habitations. The eggs are two to three in number, of a greenish blue colour, slightly spotted at the larger end with blackish and reddish zigzag markings.

In 1896, as recorded in the 'Ibis,' Mr. J. G. Kerr observed many examples of this and other species of *Saltator* on a low-lying brush-covered island in the middle of the River Paraguay, which it divides into two channels; but he records nothing respecting the habits of the genus.

The general colouring of the upper parts of the present species is brownish ash washed with olive, the crown of the head being distinctly darker and more slaty than the back,

becoming in fact almost black on the forehead; the sides of the head and of the throat are black; a broad superciliary stripe which commences above the middle of the eye, passes with a distinctly marked angle, behind the ear-coverts to the back of the cheeks; in fully adult males this stripe is white above the eye, in hens it is pale buffish, in young birds fulvous; the remainder of the stripe is rather more deeply fulvous at all ages; the chin in adult males is more or less varied with white. In male birds at all ages (not in adults only as was supposed) there is a well-defined black gular collar uniting the sides of the throat; the tail is slate-grey; the outer rectrices, apparently only in old birds, more or less varied with white at the ends; the under parts from and including the centre of the throat backwards, are of a dull rusty testaceous hue, the throat being a little brighter than the breast or abdomen; the breast in front is also somewhat smoky (which perhaps makes the throat seem rather brighter than it actually is). The beak in young birds is dark horn-colour suffused with leaden grey, but as the bird gets older it gradually changes to orange-ochreous with blackish tip; the culmen and one or two streaks on the mandible or lower portion of the beak remaining for some time after the other parts have become orange; the feet are leaden grey; iris dark brown.

With this peculiar type of colouring, it is not surprising that the late Dr. Russ should have regarded this and the other species of *Saltator* as Grosbeaks, referring them to the genus *Coccothraustes*; but why he should have applied to them the misleading trivial name of "Parrot-finch" (Papagei-fink) is a poser, unless the dentirostral character of the species suggested the misnomer: he gathers from Burmeister and Frantzius that it must have a lovely song.*

It would seem that Dr. Russ is not the only one who has been struck with the Grosbeak-like aspect of this bird; for three examples imported in September 1903, were regarded as "American Hawfinches." My friend Mr. James Housden

* Mr. J. Graham Kerr, however (*Ibis* 1892, p. 125) says that it "utters a series of chirping notes of small range." Mr. W. Goodfellow (*Ibis* 1901, p. 472) speaks of *Saltator superciliosus* having a loud sweet song, uttered from the highest twigs.

secured these birds (together with a consignment of so-called Brown-throated Cardinals, Yellowish Finches, and three Red Oven-birds), and I considered myself fortunate in being able to buy one of them: it was said to feed upon canary-seed only, and had apparently been imported upon that diet; but, seeing the Tanagerine character of the beak, I felt doubtful as to this being its correct diet, and I soon discovered that it greatly preferred soft food, fruit and insects, though it would occasionally eat a little canary-seed which I scattered upon the floor of the cage and sometimes would eat a few grains from a small pan: all the seeds were husked in the orthodox manner.

Orange, ripe figs split lengthwise, ripe pears, and grapes, were eaten with great relish. For soft food I gave my regular mixture,—bread crumbs, powdered sweet biscuit, yolk of egg, and ants' eggs; of this it ate moderately, but evidently preferred it when mixed with grade 1 of "Century Food." In the matter of insects it was not particular, leaving all other food to seize cockroaches, mealworms, caterpillars, or the so-called rat-tailed flies (*Eristalis tenax*) which buzz about the Michaelmas daisies and closely resemble honey-bees: any of these it would take from my fingers after its second day in my possession.

I suppose the unnatural diet upon which this bird had been fed during its importation had sown the seeds of the disease from which it eventually died, for two or three days after the *Saltator* came into my possession I noticed that it became sleepy and sluggish; and although, by clearing my garden of every spider I could find, and particularly the full-grown females of our old friend the typical garden-spider (*Epeira diademata*), I restored it in a few days to apparently good health and increased activity, it subsequently relapsed to such an extent that, although it bathed regularly, it never took the trouble to cleanse its feathers by passing them through its beak. Doubtless the chill of the matted plumage, which naturally became clogged on the breast with sand and juices from the fruit, accelerated the progress of the disease, so that on November 4th I found it dead.*

* So far as I have been able to ascertain, it would appear that none of the examples imported in 1903 are now alive.

Being offered to me originally under the dealer's fancy name of "American Hawfinch," it may be imagined that I was at first puzzled as to what this bird was. As the form of the beak and the bird's evident preference for soft food suggested Tanagrine affinities, I waded through the Museum Catalogue of those birds: I paused when I came to *Saltator*, but even the description of *S. aurantiirostris* did not seem to fit it exactly. I therefore wrote to Dr. Sharpe enclosing a rough coloured sketch which I did from memory; I also wrote to our Business-Secretary and Editor. All three gentlemen suggested that it was probably *Saltator aurantiirostris*; but, as I was still in doubt, I went up to the Natural History Museum and had a look at the series of skins.

I found that my bird was unquestionably a not perfectly adult male of the Orange-billed Tanager, but there was only one skin in the Museum which nearly approached it in colouring; all the other skins were paler and less brightly coloured, so that the description in the Catalogue taken from these skins necessarily gave me the idea of another, though allied species, (tawny colours fade quickly): but what put me off the track as much as possible was the wording of part of the description, which gave me the impression that the throat of *S. aurantiirostris* was wholly black.

At the Palace Show in October, Mr. Housden exhibited the other two specimens of this species, which appeared to be both hens (the gular collar being absent) and Mr. Swaysland brought up one of four quite young males which he had recently received; and which, on account of their dark beaks he thought must represent a distinct species: I was however able to assure him that this was not the case.

Of all the Tanagers with which I have hitherto come in contact, the Orange-bill seems naturally to be by far the most steady. Most Tanagers when first imported are more or less wild and nervous, nor have I ever known them to become thoroughly trustful; but *S. aurantiirostris* from the time that I turned it into its small flight was perfectly friendly; and, although at first it would fly up to its perch if I put my hand

in to renew its food, it eventually did not even trouble to do this, but merely turned its head to see that I did not attempt to take it out (as I had been obliged to do when Mr. Grönvold was preparing its portrait). Always when I passed the cage it would come to the front and look over to see whether I had anything for it. It is a confiding disposition like this which endears a bird to its owner, far more than mere brilliance of colouring. Scarlet and male Superb Tanagers become fairly tame in time; but either docility is inherent in the Orange-bill, or the poor feeding which the bird had experienced before it came into my possession served, by contrast, to render me a particular benefactor in the bird's estimation; yet even the Cardinals brought over at the same time were marvellously steady, so that I should rather be inclined to believe that the importer was more than ordinarily gentle with his birds; though doubtless low feeding does tend to subdue living things.

ON THE BREEDING IN CAPTIVITY OF THE RED - BACKED SHRIKE.

By Dr. ALBERT GÜNTHER, *Hon. M. Avic. Soc.*

On July 31st of last year I bought three young Red-backed Shrikes. Being well acquainted with the general treatment and feeding of this species in captivity, I had no difficulty in rearing the youngsters; they grew into strong birds, became very tame and confiding towards the people in the house, and showed themselves always ready for a game, during which they strike those peculiar attitudes so closely resembling the antics of young Kestrels or Hobbies. Singularly, I never saw them playing with each other in the same fashion; on the contrary, soon after they had commenced to feed themselves, and to deposit food each in its own larder, their frequent quarrels compelled me to separate them.* They had the strongest objection to the approach of strangers and visitors, and one day, frightened by a workman, two of them squeezed themselves

* I use for this Shrike an ordinary Thrush's cage with wooden bars.

through the bars of their cage and escaped into the garden. One returned on the evening of the same day, whilst the other enjoyed its liberty for another day, when it demanded readmission to the fleshpots of Egypt by flying against the window, behind which its cage was still standing.

Late in the autumn they moulted, and proved to be two males and one female. Already before the moult they had diligently exercised their vocal powers, even the female at first taking part in these musical efforts. However, she soon discontinued to sing, whilst the two males became in the end accomplished songsters, mixing with their own notes those of a Garden Warbler. Contrary to my former experience these birds did not damage their feathers by unrest during the period of migration; the whole of their plumage remained perfect throughout the winter, and in spring the lower parts of the body of the males became suffused with a pinkish blush.

In the first week of May of the present year I turned out one of the males and the female into an aviary, erected against the garden wall. Although open at the top and on three sides it occupies a sheltered position, and with a height of 6ft. it covers an area of 10ft. by 13ft. The half nearest to the wall is planted with densely foliaged bushes, a thick holly-bush among them. After a few days I noticed that both birds had the feathers round the base of the bill knocked off: I could never find out whether this injury was caused by disturbance from a night-prowling cat which made them fly against the wire-netting, or by their working and shredding the dry rough fronds of pampas-grass. At any rate, it must have been in the second week of May that they built their nest. This was done entirely in the early morning hours; the gardener saw them then busy with carrying materials, but the operation escaped me altogether, as I never visited them before eight o'clock.

On the 22nd the prolonged disappearance of the hen-bird induced me to examine into the matter. Then I found in the most hidden and densest part of the holly-bush, four feet from the ground, a well-built typical Shrike's nest with five warm eggs in it. The first egg was probably laid on the 16th.

May 22nd to 28th. The hen attends most assiduously to the duties of incubation, while the cock takes no part in them. Twice only has she yielded to the temptation and come to my call to receive from my hand her allowance of mealworms. Otherwise she depends entirely on her husband who carries every kind of food to her. But he exercises great caution in this, never approaching the nest when he perceives or fancies himself to be observed. Tame and without any fear as he is in his intercourse with me, he never betrays by any action the presence or locality of his nest.

The forenoon of the 27th must have been particularly trying to the hen: a violent thunderstorm of two hours duration, with torrents of rain broke over Kew, but she did not allow herself to be disturbed.

May 29th to June 2nd. The storm of last week was succeeded by some days of dull weather; the temperature falling to 48°, and rising at midday to 59°. The hen would not leave the nest at all during the day, but I provided at nightfall an extra supply of fresh food with mealworms and cockroaches, which she would find in the early morning, beside the food carried by the cock. This practice I have continued throughout the breeding period.

On June 3rd the weather had improved, and noticing the hen twice off her nest, I took this opportunity of entering the aviary with the object of having a peep at the eggs. But the hen foiled me both times; she slipped into the nest before I could reach it; and, moreover, the second time the cock made a most determined attack upon me, inflicting a deep scratch with his claw upon the side of my face. I tried to drive him off with my handkerchief, but this made him still more furious, although, fortunately for my face, the handkerchief became now the object of his attack. My speedy retreat restored his equanimity, and a few minutes afterwards when I offered him a mealworm, he was as amiable as ever.

Five young were hatched in the night from the 5th to the 6th of June. The incubation probably lasted 14 days, the normal period stated by all ornithological authorities. Wild Shrikes

would now only commence their nesting operations, at least in the Midland and Eastern counties. On the 8th there was again a change of the weather for the worse; a low temperature with occasional cold showers of rain reminded one of March. Yet I had no apprehension about the well-being of the young, as the hen continued to cover them with scarcely any interruption. She did not give me any opportunity of examining the nest until June 11th, when I found to my sorrow only two remaining in the nest; the three others had completely disappeared, and a search among the leaves and litter on the ground was without result. On the next day one only was left, and on the 14th the last had disappeared. On a renewed search I discovered both at some distance from the nest, close together, with the scalp torn, but without other injury; they were of good size, and had the head covered with stubbles.

Of the conjectures as to the cause or manner of death, the following appears now, with the light of subsequent events, the most probable. The young perished from the cold temperature, which supervened during the greater part of their short life. The dead bodies were removed by the parents, those of the tiniest were lost beyond recovery, whilst the oldest and heaviest had their skin torn by the efforts required for their removal.

June 20th. The male renewed his attentions to the female in a very conspicuous manner shortly after the catastrophe related. His jealous conduct, whenever she attempted to take her food directly from me, was most ridiculous to see. No new nest was built; and this morning the old nest was still empty. I left home in the afternoon, and returned on June 24th, when I found the hen sitting; she left after a little persuasion, so that I could obtain a good look at the eggs which again were five in number. They were more brightly ornamented than those of the first clutch, the brown spots near the broad end forming an almost confluent deep-coloured circular head.

The period of incubation passed under more favourable meteorological conditions than on the former occasion. The male kept the hen regularly supplied with food, which, however, did not prevent her from coming sometimes to my call to receive an extra supply of mealworms.

July 7th. To-day the eggs were due to hatch, so I examined the nest in the morning, and found four of them hatched. The fifth young appeared on the following day; it was conspicuously smaller than the others, and survived one day only. On the 11th a second, also of smaller size, died. The bodies of both were found at a distance from the nest, nearly in the same place, quite uninjured.

July 8th to 22nd. In the glorious weather which we were enjoying during this month, the surviving young made good progress. Both parents fed them; their jealousy had much abated, and they never resented my daily examination of the nest. On one occasion I surprised the male quietly squatting on the margin of the nest, with food in his beak, and waiting until it was demanded from him.

July 23rd. The excitement of the parents indicated some unusual occurrence; two of the young had left the nest, and the third followed later in the day. All were on the ground, making their first attempts at locomotion, but in a more awkward or helpless manner, than can be seen with Finches or Warblers which have just left the nest. Whether this want of strength is common to all Shrike fledgelings, or whether it is due to the artificial conditions under which the old parents lived, I am unable to say. Their wing-feathers were so little developed that it took three days before they could manage to scramble again into their holly-bush; and the weaker of the three is still, after six days, unable to take a flight, however short. Yet in all other respects they show themselves to be healthy and in normal condition. I was particularly pleased to see that their instinct leads them during rain into sheltered or dry places. In the night of the 26th they were exposed to the fierce downpour of rain, which flooded London and the suburbs; and it was a great relief to find all three well in the morning. Probably, the hen afforded them some protection. The cock always roosts by himself.

By August 2nd they had made rapid progress in their growth and strength, although a great part of last week was dull and showery. The two strongest fly freely about for some distance, and reach the top-perches without difficulty; occasion-

ally they pick up food. In size they are scarcely to be distinguished from their parents, but their tails are only half the full length. The third is more backward, though apparently in good health.

Aug. 9th. All went well during the week. If kept in a cage by themselves the young Shrikes would now entirely feed themselves, but as the parents seem to take special delight in carrying the food, the young are never hungry enough to cater for themselves, although they pick up scraps which happen to come in their way. In some respects it might be better now to cage them. The hen is sometimes busy hunting for small earth-worms, which she tears into smaller pieces to give to the young. I have never before noticed a Shrike eating them. She also confines her care in feeding to one of her children, the strongest, which usually settles on a particular perch, whilst the cock attends upon the two others which are of a more roaming disposition. I often witness the feeding during the day, but since I observed the partiality of the parents to particular young ones, I have never noticed a variation of this habit.

Aug. 14th. The young help themselves freely from the dish containing the food for the family; but mealworms and similar tit-bits are still carried to them by their parents. They can be distinguished from the old hen by their lighter colour only; one, probably a male, exceeds its mother in size. The old male has recommenced to sing, one of the young often sitting beside him.

Aug. 28th. The parents have discontinued to feed the young, and leave them entirely to their own resources.

The Butcher-bird sitting on the top of a hedge-row or thorn-bush is a familiar object, and there will be but few ornithologists who have not seen its larder and are not otherwise well acquainted with its habits and domestic economy generally. But there are certain of its habits and traits in its character which it would be difficult to observe in the field, and which in my opinion render this species particularly attractive and full of interest to the aviculturist. Some of its habits remind us of those of the smaller Hawks: such as the manner in which it uses

its claws when striking in an attack upon an enemy or large prey, or in which it uses them when grasping and holding up a large beetle or bumble-bee whilst it is pulling the prey to pieces. I have already mentioned the Hawk-like attitudes of the male when he is inclined to play. While this species readily accommodates itself in captivity to associations with man, it nevertheless does not deteriorate in its natural character. No bird is more observant of everything going on around it; it watches and understands every one of your movements, every bird or animal which happens to pass within the range of its keen vision, betraying by an angry chatter the approach of a stranger, a cat or a Hawk, whilst the members of the household, even the dogs, are viewed with indifference or received with pleasure. The birds I have at present readily come to the call, either to receive food which they take from the hand in a particularly gentle manner, or merely for the sake of amusement, for the male likes to play with a finger held out to him, a stick, or similar object.

The qualification of the Butcher-bird as a songster is of no mean order, although I have never among English specimens met with so accomplished an artist, as was a German bird which imitated the song of a Blackcap-Warbler to perfection. My male which is living in celibacy, has now continued to sing from November to the end of August.

Whether other species of Shrike would make equally attractive cage-birds, I have no experience. The Larger and Lesser Grey Shrikes which I have kept, had previously passed through hands, in which they had not the advantages of proper treatment. I am now very anxious to try the Woodchat. To domesticate Shrikes (if I may use that expression), and to completely reconcile them to life in captivity, it is necessary to take them from the nest. Older birds never lose their natural shyness, and survive the loss of their liberty for a short time only, so that no attempt should be made to cage them. The young birds reared in my aviary, were at first very timid, but by the time they fed themselves, they came and took mealworms from the hand, being nearly as tame as were their parents when of

the same age. If they survive till next spring (and there is no reason why they should not) the doors of their and their parents' cages will be opened at a place distant from London fogs and cats, where they will find every inducement to stay and propagate their species.

This report extends to a greater length than I anticipated, but before concluding it, I may add a few words on the food on which I found my Butcher-birds to thrive. I gave them a mixture of dried ants' eggs, artificial food (Century or Abrahams'), mixed raw beef and hard boiled egg, and finely scraped raw carrots. The proportions of these ingredients vary at different times of the year, and according to the state of health of the birds. At times (for instance, during moulting or in very cold weather) the supply of beef is increased; when they are restless at night, the vegetable substances are given in larger proportions, but at all times dried ants' eggs are required to facilitate the formation of castings which in Shrikes are as sure a sign of health as in Hawks. When fresh ants' eggs are available, I give them mixed with the dried. The birds receive, besides, daily from four to ten mealworms, in addition to cockroaches or other insects, if such happen to be at hand. With this food my birds, after the strain of having had two broods of young in succession, are in as healthy a condition as they were at the beginning of summer. They have never shown the least sign of impatience at the confinement, in which they have passed the first year of their life; and I therefore feel all the more justified in recommending this species to aviculturists, and hope that they will derive from it as much pleasure as my birds have given me.

A CHAPTER OF ACCIDENTS.

By A. TREVOR-BATTYE, M.A., F.L.S., M.B.O.U.

When our late Honorary Secretary kindly asked me to send an aviary letter to the Magazine, I thought it better to wait until the breeding season was over and there was more to say, for here we only keep a few birds. But meanwhile perhaps the following remarks on the bad luck this year of certain of the wild birds of our garden may not be uninteresting to some of our members.

If it does not make this letter too long I may just sketch the kind of country in which the garden lies.

We are on the slope of a hill which falls to the valley of the Test; at this point the river is nearly one hundred and fifty feet above the level of the sea. A quarter of a mile below the house the river runs, split here into two widely-separated channels, and receiving a considerable tributary from the Micheldever hills. The valley below is all green and soft; water-carriers, bog-lands and peat-holes are its characteristics, from the big common of Bransbury above us, to Stockbridge, and further, below. Above the house rise the high down-lands (now for the greater part ploughed up) stretching away to Winchester and the Itchen valley. Across the valley the corresponding chalk hills range away to the Berkshire border and the valley of the Kennett. These hills are generally bare, saving for solitary clumps of beeches or sometimes of fir.

About two miles away lies a wood of some two thousand acres—the remains of the ancient forest of Harewood, where *Daphne mezereum* grows wild—and some of the landed estates have fair-sized coverts; yet it is an open not a wooded country, with an almost total want of hedgerow timber.

Of course each of these areas has its own distinctive character of plant, insect and bird life. The down-lands have their gentian, Chalk-hill blue butterflies, Wheatears, and Thick-knee Plovers, and in the fir-clumps Long-eared Owls; the valley has its sundew, buck-bean, *Ephemeridæ*, Water-rails, Snipe, Dabchicks, and Duck; the great isolated woodland its yews, White Admiral butterflies, Woodpeckers, Nuthatches, and Tawny Owls.

Here though close to the river we are quite away from the woods; Snipe, Duck and Plovers cross the garden, Dabchicks visit at night the little pool in the Flamingos' enclosure, but although there are many big elm trees about the garden we never have a Woodpecker there nor a Nuthatch, and the Wryneck is very seldom heard. While the Great and the Blue Titmouse are always with us (except in the month of August, when they disappear with their young till the sunflower seeds are ripe), and nest in the boxes, the Marsh Tit is very rarely seen in the garden and the Cole Tit never.

Now for our run of bad luck. We have no rookery in the garden and we want the Rooks to settle there. In the winter they would come down close to the window and feed at the birds' table. This spring, to our great delight, a pair came and built a nest in the top of the biggest elm a few yards from the house. The eggs were hatched, the young were being fed, when everything unaccountably stopped. The old birds gave up coming and the young ones died.

Once more we were doomed to disappointment. There are Barn Owls in the thatched roof of the cottages; we wanted them near the house. We made an excellent loft for them under the thatch of the seed-room roof, and fixed up two Owl-boxes in the elms. A neighbour sent us last year a pair of Barn Owls, with their two big young ones; the old birds were set free and went straight off to their home three miles away, the young ones we kept in an aviary. Towards autumn they were liberated, and fed from the roof of the aviary. They lived partly in the seed-room loft, partly in one of the boxes in the trees. Thus they flew at hark for some time, eventually catering entirely for themselves and leaving untouched the food we provided. They ornamented the tennis lawns with many large castings—always composed of mice and vole remains. Towards the end of April and the beginning of May they were very interesting, and for several days running came out for their evening flight just as we were going in to dinner. One (perhaps the male bird) always gave a loud screech as it left the box and then sitting on a dead branch waited for its companion to join it. They used to beat the garden and paddocks very regularly each night. They never

seemed to hunt the water-meadows, but always after they had finished at home they moved off to the high down-land behind the house.

Early in June they began nesting in one of the boxes and as afterwards transpired laid six eggs.

Ours is a great bee country because of the good supply of thyme and other bee flowers on the downs. There are many hives in every village; in one field not far off are over seventy hives in a row. Last year (1903) a swarm of bees took possession of one of the Owl-boxes and gave us 25lbs. weight of pure honey. The box was then unoccupied so it was of little moment. But, again this year a strong swarm suddenly appeared in the air and went straight into the box where the Barn Owls were with their eggs. The poor birds remained in the box all day in spite of their myriad foes, but with evening they could bear it no longer; and a little before their usual time both flew from the box to return to it no more. When after much difficulty we had removed the box and driven out the bees, there were the six eggs, each containing a dead young Owl that would have been hatched in a few days' time. The ill luck of these birds might clearly have overtaken them just the same had they been quite wild birds in their hollow tree.

But Rooks and Owls are not the only wild birds that have fared badly in our garden this summer. A pair of Yellowhammers made a nest right in the middle of a big rhubarb leaf a foot or more above the ground. The hen laid five eggs and began to sit. It was an odd, ill-considered place, yet doubtless she would have hatched; but there chanced a day when a sudden storm of wind upset the nest, and all the eggs rolled out.

A Tree-creeper, again, hatched seven eggs in the thatched side of a garden hut. All went well until the young were just ready to fly and then one morning saw them all dead in the nest. Something no doubt had killed the old birds, but what? A weasel could have climbed up but would have taken the young as well; nor have we ever seen a weasel in the garden.

We had also a Goldfinch's nest in the top of a twenty-

foot Austrian pine in the stable yard. The hen was sitting, and the cock, perched above her on the very tip of the leading shoot sang there by the hour most charmingly. This nest was destroyed, I believe by Sparrows who pulled it to pieces, scattering the eggs to the ground and pilfering the material for their own nests. In addition to this a persistent two days' rain killed all the young in a Grey Linnets' nest.

Now of course it was merely a coincidence that so many accidents should have befallen nests in a single garden. But the fact does go to show some of the risks run by all wild birds at nesting time from natural causes, though we do not always have them so easily under observation.

P.S.—We keep a careful eye on our Sparrows' nests in the interests of a nursery of Burrowing Owls; and, although it has little connexion with the foregoing, I may add that several Sparrows' nests this year both in the ivy of the walls and in the bird-boxes contained but a single egg, and consequently but one nestling. It is also worth remark that in one of the bird-boxes this summer a cock Sparrow did practically the whole of the sitting. I only saw the hen sitting on one occasion, just before the young one (there was but a single egg) hatched.

THE BREEDING OF THE RED-FACED LOVEBIRD:

Agapornis pullaria.

By G. C. PORTER.

Early in the summer I was offered a freshly imported lot of Red-faced Lovebirds. I had never kept these birds before, as they are popularly supposed to be rather stupid and delicate birds. I had my doubts about buying them, especially as the dealer encouragingly remarked that he should not be surprised if they all died like flies, but I could have them cheap if I cared to. Finally curiosity prevailed over prudence and I carried off my purchases, not however without some misgivings as to the future. They looked well and seemed wonderfully tame, but I found out that this was partly induced by the small space they

had been confined in and partly by their each having a clipped wing. By the way, I cannot understand why it should be thought necessary to clip the wings of this bird more than the other Lovebirds, which seem to be mostly brought over intact. On my return home I looked up my biggest cage, turned them out into it, and placed it in the hottest part of the kitchen I could find, thinking that the artificial heat would induce the feathers to grow again. I had been advised to catch each bird and draw the stubs of the quill feathers, but I did not think it advisable to do this, as the shock might prove very injurious to these nervous birds who almost seem afraid of their own shadow. I was told that these birds when caught in Africa are fed solely on rice, so failing to get a supply of paddy rice (that is rice in the husk) I gave them ordinary table rice which they seemed very fond of. After a week or so of this treatment I was pleased to see the bottom of the cage plentifully strewn with shed stubs and feathers, and to see evidences of new ones growing in their place. The weather now began to turn warmer, enabling me to place the cage out of doors for a few hours every day, and this began to make a wonderful difference in their appearance. I found they very much disliked the direct rays of the sun, invariably sitting under the end of the cage which I kept covered with rhubarb leaves. I was now able to leave them out for a longer period every day, only taking them indoors for the night, and I added canary seed to their supply of rice. Millet I never tried them with. The result of this treatment was that, with one exception, they could all fly, and one fine day I turned them out into a large well-planted aviary, and it was a pleasure to see how they enjoyed themselves.

For the first few weeks the foliage seemed to be getting thinner, and the suspicion in my mind soon became a certainty that the Lovebirds were doing their level best to wreck the aviary and were showing a love of pruning only to be equalled by a professional gardener. In about a week they nearly stripped a large apple tree of its leaves and shoots. Their mode of procedure was as follows:—Starting at the bottom of a twig they would steadily crawl up it nipping off the leaves one by one until they reached the top, when they would fly down and begin again.

I soon tired of seeing this performance repeated, and decided to decoy them into a smaller aviary abutting on the larger one. I was very sorry indeed to have to do this, but the circumstances compelled me. The Lovebirds were well able to take care of themselves and would let nothing interfere with them, indeed they seemed to be universally respected by all the birds in the aviary. It was an easy matter to capture them by placing the seed in the small aviary, and watching my opportunity, I soon had them shut off. They lived very happily in the aviary, for some months, but finding they were rather too crowded I reduced my stock to two pairs by parting with several, chiefly to members of the Society. Just before my departure to Scotland I noticed signs of breeding and this interesting event unfortunately took place in my absence.

They nested in a small box with half a cocoanut husk cemented inside, but any exact details I cannot give. On my return I found two fine young ones, which had been reared, dead on the floor of the aviary. I do not know whether to attribute their deaths to the mice which infest the place or to the excessive heat at the time. The young birds were very fat and appeared to me to be somewhat larger than the old birds. I have every reason to be satisfied with my experience with these birds, conclusively proving that they are not the dull, stupid, delicate birds they are popularly supposed to be. I only lost one adult bird, which mysteriously disappeared one day without leaving a feather behind, perhaps I have the mice to thank for this also. Should anyone wish to keep a hardy, interesting little bird I would say get a pair of Red-faced Lovebirds and you will not be disappointed.

[Mr. Porter's experience is extremely interesting, for the Red-faced Lovebird is generally regarded by aviculturists as one of the most difficult birds to acclimatise, though when once acclimatised it is acknowledged to be hardy. It is much to be regretted that the young were not reared; but the fact of young having been produced at all is a matter to be proud of.—ED.]

NESTING OF THE YELLOW-RUMPED PARRAKEET.

Platycercus flaveolus.

By WM. R. FASEY, F.Z.S.

My pair of Yellow-rumps have at last succeeded in rearing one young one, which is now capable of looking after itself; two left the nest, but from some unaccountable reason one died soon after.

I believe Yellow-rumps to be rare, and the one at the Zoo is the only one I know of besides my pair. I obtained mine in 1901, and in 1903 they first nested, and hatched two young ones which died in about two weeks; probably through neglect on the part of the old birds. I think the fact of their being so wild had something to do with it. Even now they are as wild as any bird I have.

Four eggs were laid early in June; young were hatched, as near as I can tell, in twenty days, and left the nest (half a cocoanut husk cemented in a square box) when about a month old. The young ones are marked exactly like the old ones, but the colours are much less brilliant; the black spots on the yellow ground of the old ones are only just discernable on the young, and instead of the bright yellow ground colour a greenish hue exists. In other respects I am unable to see any difference.

The old birds are like Pennants in build, manner and marking, and excepting for the difference in the ground colour the two species seem to be identical. The plate in *Parrakeets* is an excellent one, and exactly corresponds to my old pair.

If any of our members care to see the young one, or other birds of mine, I shall be delighted to show them.

TALPACOTI DOVES BREEDING IN CAPTIVITY.

The Talpacoti Doves (*Chamæpelis talpacoti*) I have had in my collection of doves since August 13th, 1903. They have reared three broods in my aviary; the two first pairs I sold, and cannot recall the date of these two broods; probably I was away at the time. The eggs of the third brood were laid on July 6th and 7th, 1904, and were hatched out on the 22nd.

The nest was built inside the house, quite near the roof, amid some old pine branches which I had nailed up for that purpose. It was composed solely of hay; and was so small that it appeared hardly capable of holding the two eggs. When the bird was sitting on its nest it had the appearance of a man with a hat too small for his head.

At the time of writing they have nested again and both eggs have hatched out. The birds are of a brown vinous red, paler on the breast, greyish blue on the forehead, and have an edging of black with blue black blotches on the wings; the female is paler and browner in colour, and the young resemble her.

C. CASTLE-SLOANE.

AN ACCOUNT OF SOME EXPERIMENTS IN REARING WILD FINCHES BY FOSTER-PARENT BIRDS.

By Prof. W. E. D. SCOTT.

[*Reprinted from SCIENCE, N.S., Vol. XIX., No. 483, Pages 551-4, April 1, 1904, by the kind permission of the Author.*]

During the spring of 1901, having some twenty pairs of Canary birds mated, I attempted to induce them, in two cases, to incubate the eggs and rear the young of wild Fringilline birds. These experiments led me to continue similar efforts during each succeeding spring, and I propose to summarize the results of what occurred in this way, in 1901, 1902 and 1903.

In May, 1901, I secured a set of Song Sparrow's eggs (*Melospiza cinerea melodia*). There were four eggs in the nest and incubation had just started. I brought the eggs, together with the nest to my laboratory, and took away from a very tame hen Canary bird four eggs which were in her nest, substituting the Song Sparrow's eggs. I watched the hen Canary for a short time to assure myself that my actions had not prejudiced the end I had in view, and was presently delighted to see her return to the nest and settle herself to brood the eggs as if they were her own. In due time, after about eight days, all of the eggs were hatched, and four lusty young Song Sparrows became the foster-children of the Canary. This bird was an especially good parent, as I had proved by her rearing with success three broods of Canary birds during the preceding season of 1900, the whole

of the young aggregating thirteen birds, all of which reached maturity, and were strong vigorous examples of their kind. This hen Canary seemed as solicitous for the young Song Sparrows as she had been for the young of her own kind, and so far as I could see she did everything in her power for her foster-children. In spite of all her efforts, when the Song Sparrows attained an age of about six days, and were just beginning to show feathers, one by one they weakened and died, though both the parent Canaries, cock and hen, fed and brooded them constantly.

Later in the same season I secured a clutch of four Field Sparrow's eggs (*Spizella pusilla*), and gave them to another equally good pair of parent Canaries. The results were almost identical with the case cited above; the eggs were all hatched, the young seemed strong and vigorous, the foster-parents appeared to do everything conducive to their development, but all of the young died during the first week after they were hatched from the egg. This concluded my efforts in this direction for the spring of 1901. In the month of May, 1902, I was able to carry on a much more elaborate series of experiments, which I will now summarize. Some of these, in the light of my former experience, I conducted under slightly varying conditions, which I thought might yield more definite results. On May 11th, 1902, I found in a field on the ground a nest of Field Sparrows, the female sitting on four eggs, and there were, at the same time, two larger eggs in the nest, which I took to be those of the Cowbird (*Molothrus ater*). The nest and eggs I brought to the house, keeping them warm, and placed the four Field Sparrow's eggs under a hen Canary which was sitting, and the two Cowbird's eggs I gave to another Canary. Both females covered the new eggs which had been introduced into their nest, and brooded them within a moment after I had left them. The four Field Sparrow's eggs, placed under the first Canary, began to hatch on the morning of May 22nd. I had left one Canary bird's egg in the nest, and this also was hatched early the next day. Another of the Field Sparrow's eggs hatched late on May 22nd, and in the morning of May 23rd there were in the nest one Canary and three Field Sparrows, and one unhatched egg of a Field

Sparrow. On May 24th I discovered the three Field Sparrows dead in the nest, but the young Canary bird was flourishing, and in course of time grew up to maturity under its parents' care.

To return to the Cowbird's eggs in the same clutch; both of these eggs were hatched on the morning of the twenty-second, and, also, two Canary bird's eggs which I had left with them, so that there were two Cowbirds and two young Canary birds in the nest. Throughout the day and on the day succeeding one the parent birds paid close attention to the brood, and the young birds, I could see, were strong and hearty, as all four of them raised their heads to be fed, and seemed to be treated precisely alike by the parent Canaries. The same conditions prevailed on May 24th. On the morning of May 25th the birds were doing well and had grown rapidly. On the afternoon of May 25th one of the Cowbirds died, though the other was still strong, and with the two young Canary birds was constantly fed by the parents. On May 25th the second Cowbird died, and I introduced two young Chipping Sparrows, apparently of about the same age as the two young Canaries, to take the place of the two Cowbirds. I saw the old Canary bird at once feed the two Sparrows as she did her own birds, and during the day a young man, whom I had posted to watch the proceedings, reported that they were constantly fed. On May 27th the two young Sparrows were strong and healthy, as well as the young Canaries. The same conditions prevailed on the twenty-eighth, and on the twenty-ninth of the month. On May 30th one of the Sparrows died and was removed. The other appeared strong and healthy, and so far fledged that its species could be discriminated. The old birds fed the remaining young one throughout the day as well as the young Canaries. On May 31st the young Sparrow and the Canaries were vigorous and flourishing. This condition of affairs was maintained until June 2nd. On June 2nd I found the single Sparrow so far grown as to be able to leave the nest, though the two Canaries were not so far advanced. At eleven o'clock the young Sparrow left the nest and hopped about the floor of the cage; after an hour I put him back in the nest, where he remained till the next morning. On June 3rd the Chipping Sparrow again left the nest, and I did not return him

to the structure until late in the day. On the fourth, the two young Canaries and the Chipping Sparrow all left the nest, though the Canaries resorted to it from time to time. All the birds grew and flourished, but on the ninth of June the Chipping Sparrow died. The two Canary birds, however, thrive and ultimately reached maturity. During the latter part of his life, the Sparrow was going about the bottom of the cage and hopping on the perches, attended to carefully by the parent birds. He, however, did not seem especially strong in his legs, and for a short period, four or five hours before his death, he was not only unable to grasp the perches, but could not run about the bottom of the cage as he had done earlier. I concluded that several factors may have militated against the rearing of this bird by Canaries: (1) His development seemed more rapid than that of the young Canaries, and he was more restless and anxious to leave the nest than were the domesticated birds. (2) I think that the artificial lining of the Canary's nest was of such a nature as not to permit the proper development of the leg muscles and feet during the time he was in the nest. (3) The length of the tarsus in the Sparrow, being twice as great as that of the Canary birds, seems an important element to take into account, as this part of the leg was so long that it seemed to be not only in his way, but was constantly trodden on and sat upon by his two associates. It must be remembered that this bird left the nest voluntarily on the date first mentioned, and though restored several times, very soon left it again. He appeared to be very uncomfortable in the nest, and this discomfort was largely due to the length of his legs. At the time of his death the bird was about two-thirds grown, and almost fully feathered in the first plumage of the Chipping Sparrow (*Spizella socialis*); though he could hop about the floor of the cage, and for a time was able even to balance himself on the perches, his legs, on the whole, seemed weak, and I attribute the cause of this misdevelopment of the muscles and tendons of the feet and legs to the kind of nest lining used by the Canaries. I may say here that this consisted of deer-hair with an admixture of cow-hair, the whole being a felted mass, and not presenting the grasping surface afforded by the fabric and lining of the Chipping Sparrow's nest, as found out of doors.

My experiments in the season of 1902 included, besides the above, an additional brood of Song Sparrows, which contained four Song Sparrow's and one Cowbird's egg. All of these hatched and lived for periods varying from four to seven days, none of the birds leaving the nest. I also experimented with a clutch of five fresh eggs of the Yellow-winged Sparrow (*Ammodramus savannarum passerinus*), which I divided between two different parent Canaries, leaving two Canary's eggs with three Yellow-winged Sparrow's eggs, and in the other case two Yellow-winged Sparrow's eggs with three Canary bird's eggs. Both clutches were hatched, there being five young birds in each nest. The Canary birds in both cases were reared and reached maturity, but the young Yellow-winged Sparrows which were also hatched died at ages varying from four to seven days.

I also attempted during this season to raise young Bobolinks under Canaries (*Dolichonyx oryzivorus*); to this end on May 28th, having found a nest of five eggs, I introduced two of them to a large breed of English Canary, leaving two of her own eggs in the nest; the other three Bobolink's eggs I placed under another Canary of a similar kind, leaving two Canary eggs in addition. This Canary threw out her own eggs, but retained the Bobolink's eggs, and incubated them till they were hatched, which was on June 8th. The three young Bobolinks lived for three days, when one of them died; the remaining ones died on the fifth day. The other Bobolink's eggs, under the English Canary, were also hatched on the eighth, but both died on the tenth of the month; the young Canary birds hatched at the same time were reared to maturity, when I no longer followed their history.

In the spring of 1903 I tried several similar experiments, sometimes putting but one egg of a wild bird with a clutch of Canary's eggs, and never giving one Canary an entire complement of wild bird's eggs. In all cases the eggs were hatched and in no case did the foster-young attain an age of more than a week, though it is to be remembered that in every case young Canaries in the same brood with the foster-birds flourished and reached maturity. During the season of 1903 I took two young Song Sparrows, just beginning to show the feathers, and put

them with two Canaries about the same size, though more fully feathered. These birds were readily adopted by the parent Canaries, but one of them died after three days; the other was reared, reached maturity, was weaned by the old birds, being treated precisely as were their own young, and is still alive at this writing.

This series of experiments I have reported as a suggestion for further work of a similar kind. I had hoped that hatching the eggs of wild birds under Canaries would enable me to observe the development of the foster-young to an advanced age. It seemed to me that there would be no possibility of their song being other than such as could be attributed either to inheritance or to intimate association with a new kind of singing bird. In all this I have, of course, met with disappointment; the only young bird being reared to maturity, from the many I have tried, was a Song Sparrow, almost fledged before introduced to his foster-parents. It has occurred to me that perhaps the kind of food, partially digested by the parent Canary birds, and then regurgitated and fed to their young, would have militated against the growth and development of another kind of bird. However, in the case of three Cowbird's eggs upon which I have experimented, all of which were hatched, this should not have prejudiced their growth, when we consider the variety of foster-parents that are induced to hatch and rear the eggs and young of the Cowbird.

To briefly summarize the work I have described in some detail, forty-one different eggs of wild birds, representing six species, and three young birds already hatched, form the aggregate of individuals dealt with. All of the forty-one eggs were fertile, and were hatched by the foster-parents. This is suggestive in regard to the propagating powers of wild birds, and though not conclusive, indicates a much higher percentage of fertility in the eggs laid by them than obtains in song birds when caged, or semi-domesticated. None of the young which were hatched from these eggs reached a greater age than seven days, which would seem to indicate that the food supplied by the foster-parents, which was the same on which they raised their own offspring, was of a kind so different from that used by wild

birds in rearing their young, that it proved inadequate. I also believe that the nest lining was of a character so unlike that of the nests natural to the foster-chicks, that it prejudiced their development and growth.

In the light of the knowledge I have gained I shall endeavour, in the coming breeding season, to conduct further experiments of a similar character, and hope for better results. It seems worthy of note that I have been able to rear not only all the kinds of birds mentioned by hand, but in addition some twenty other species of song birds. These birds have been taken from their parents' care at ages varying from three to six or seven days, and over ninety per cent. have been successfully reared, being fed by hand. Such birds in most cases have not only reached maturity, but many of them have lived from three to seven years.

DEPARTMENT OF ORNITHOLOGY,
PRINCETON UNIVERSITY.

ON THE HEALTH OF SMALL FINCHES.

By Mrs. JOHNSTONE.

I suppose nearly every Member of the Avicultural Society commenced with the A. B. C. of Aviculture, viz. Budgerigars, Canaries or the more commonly imported finches—and it is as well it is so for the sake of experience! No one can teach us, and we learn some lessons, at any rate, when keeping these pretty, but fortunately inexpensive, birds.

But as time goes on and we are *not* content with the A. B. C., we want to try our hands on more interesting and consequently more delicate birds. Perhaps as a bird keeper of some years experience, a few words on the health of the more delicate finches may be acceptable. At the present time I have some twenty-five Parrot Finches, nearly all aviary bred; three Gouldians, the remains of a flock; some Rufous-tails and a number of Diamond Sparrows, all flying in a small outdoor aviary.

In the Summer, all goes well; they have never suffered

from egg binding, and disease for six months in the year is practically unknown, but in the six gloomy winter months, when the aviary is heated with hot pipes and ventilation a difficult matter, it *was* a different tale.

The winter before last I lost numbers of little birds, so constant were the deaths that I feared I had bird fever amongst my flock. Nearly all my Gouldians died and one or two Parrot Finches, and none looked well. It was their first Winter in their present aviary and I had perhaps forty small finches in an aviary 14ft. by 12ft. and 12ft. high.

But it puzzled me why they should die in the winter and not in the summer. Their aviary never went below 45°, and was kept at an even temperature, the water was tepid, and no green food given, unless sound and dry, and yet they died.

The causes of death were principally enteritis, or liver and bowel complaints, or pneumonia, and these diseases never occurred in the summer.

I suppose how far blood poisoning is the primary cause of these diseases is somewhat doubtful, but pneumonia amongst human beings is constantly caused by blood poisoning.

A heated aviary in the winter rarely gets thoroughly aired, all the birds are confined in a narrow space, and the poison from the excreta must accumulate in the form of bad gas.

Who does not know the rather stuffy smell of a heated aviary the first thing in the morning before it has been aired.

I doubt if human beings would be well under such circumstances, and surely the delicate tiny finches accustomed to pure air, must be affected. To open a window all night would be to court disaster, as a finch would be sure to choose a draughty spot and die of inflammation of the lungs next day.

It is also certain that when birds can winter out of doors they have much better health than those in heated aviaries.

I had always heard that to keep eucalyptus trees, growing in a room, was a remedy against influenza, in any case a powerful and natural disinfectant, as the living tree consumes the bad gas, and keeps the air pure and healthy. I therefore, last

winter, placed four eucalyptus trees in my aviary—one with the Black-capped Lories, which they promptly devoured—one with the Starlings, they ate a large number of leaves, it did not appear to cause them any inconvenience, although as a rule they will not eat green of any kind. The little Finches did not eat the leaves, but there is no doubt the air of the aviary was purer and fresher in the mornings.

I lost nothing like the number of birds last winter, and they appeared so much livelier and less heavy than previously. They had two trees in their aviary, the *Eucalyptus globulus*, the most common tree of this variety in Australia. The great enemies of the eucalyptus are the mice. It appears to be as popular with them as the Starlings or Lories, and I think the oldest tree procurable would be the least extravagant, as they cannot bite through the old bark. The top of the pot must be wired and also underneath to prevent the mice burrowing in, and if this can be managed the tree, well watered, will thrive and do well in the aviary, as it is a fairly hardy variety, but will not stand severe frosts.

I cannot help thinking if this tree was kept in every aviary the birds' health would greatly benefit, and there would be a smaller casualty list at the end of our Magazine.

BIRDS OF PARADISE IN ENGLAND.

Mrs. Johnstone has had the good fortune to obtain some very rare birds, amongst which are two King Birds of Paradise (*Cicinpurus regius*), two Lesser Birds of Paradise (*Paradisea minor*), and one splendid Great Bird of Paradise (*P. apoda*). All are said to be in very good condition.

FURTHER NOTES ON THE TATAUPA TINAMOU.

The story of my trio of these interesting birds would hardly be complete were I to omit any record of their doings since my observations were published in the August number of this journal. I had at that time four young birds reared; now I have ten practically reared, and four more newly hatched—fourteen young birds altogether, which speaks well for the

prolificacy of the species, and the ready way in which it breeds in captivity. The following notes will, I think, prove more conclusively than ever that this species is polyandrous.

When I wrote my former notes there was one bird reared and a second brood of three, about a fortnight old, all of which have now grown into fine birds. By July 21st another clutch of six eggs had been laid, and the original male, which we will call No. 1, commenced to sit. I was away from home at the time, but sent word that the female should be driven into another aviary in which were the four immature birds, and the new imported male, which I have already mentioned as having arrived on the 6th of June. This was done on July 28th.

This male, which we will call No. 2, was, and still is, an extremely shy bird, and it would not have been at all surprising had he shown no inclination to breed before next spring or summer. However, they appear to have paired at once, for on my return home on August 4th there was a nest with one egg in it, hidden behind some rough logs. Four more were laid on alternate days, and, on August 10th, the male (No. 2) commenced to sit, and although such a shy bird, he sat extremely well. When this bird came its bill was a lead-colour, either showing that it was not in breeding condition, or that it was an immature bird, but it soon turned red.

The same day as No 2 commenced to sit, No. 1 brought off a fine brood of six, every egg proving fertile.

September 1st. Male No. 2 hatched four out of the five eggs, the fifth being addled.

As I write the brood of six, hatched by male No. 1, are grand young birds, and have now become very tame, running towards me when I enter the aviary, and almost taking tit-bits from my hands, although for the first week or two the young are extremely shy.*

D. SETH-SMITH.

* The old female has gone back to her original mate (No. 1) and has laid still another clutch of 6 eggs upon which the male has commenced to sit. (Sept. 11th.)

A STATION FOR THE STUDY OF BIRD LIFE.

Articles of Incorporation have just been drawn looking to the establishment on a permanent foundation of the "Worthington Society for the Investigation of Bird Life." The founder, Mr. Charles C. Worthington, will erect and endow, on his estate at Shawnee, Monroe County, Pennsylvania, the necessary buildings and equipment.

The Worthington Society will have for its purpose the consideration of bird life as it is found in nature, and will also have many birds under confinement for study and experiment.

The following is a summary of the chief topics that will present an immediate field for experimentation, which it is proposed by the liberality of the foundation to make continuous and exhaustive in the hope of reaching conclusive results.

- I. The study and consideration of a bird as an individual. It is believed that by means of observation carried through the entire life of the individual, with a daily record brief or elaborate as exigencies may require, much will be learned regarding matters that are now obscure. Facts, such as growth, habits, health, temper, etc., will be daily reported.
- II. The study of the occurrence, extent, nature and cause of variations in different representatives of the same species.
- III. Changes in color and appearance correlating with age, sex and season.
- IV. Changes in colour and appearance due to light, heat, presence or absence of moisture, and to food. How rapid a change of appearance can be effected by a new environment or a new set of conditions?
- V. Heredity. What general characteristics are transmitted? Are acquired characteristics transmitted? The consideration of atavism, prepotency and telegony.
- VI. Experiments in breeding. Hybridity and the fertility of hybrids. The possibility of establishing a new physiological species.

- VII. Experiments in change of color due to moult.
- VIII. Adaptability. The plasticity of animals. How great a factor is this in domesticating new kinds of animals?
- IX. The leisure of animals. How is this acquired? Being acquired, how is this employed?
- X. Instinct, habit, and the development of intelligence.
- XI. The possibility of breeding insectivorous and other beneficial kinds of birds to re-stock a given region or to increase native birds, as has been done in the case of fish, by the United States Fish Commission.

A temporary laboratory and aviary is being equipped, and preliminary work will begin with the instalment of a large number of native and foreign birds early in September. Mr. Worthington has procured the services of Mr. William E. D. Scott, Curator of the Department of Ornithology at Princeton University, as Director of the proposed work. Mr. Bruce Horsfall has been engaged as chief assistant and artist. The corps of assistants and workers will be increased as the plans of the Worthington Society develop.

BIRD NOTES FROM THE ZOOLOGICAL GARDENS.

Additions during the month of August 1904:

AUG.	1.	5 Common Mynahs <i>Acridotheres tristis</i> .	..	(India).
"	1.	2 Crested Pigeons, <i>Ocyphaps lophotes</i> .	..	(Australia).
"	1.	1 Tigrine Turtle Dove, <i>Turtur tigrinus</i> .	..	(India).
"	2.	4 Jackdaws, <i>Corvus monedula</i> (vars).	..	Europe.
"	2.	1 Grey Parrot, <i>Psittacus erithacus</i> .	..	W. Africa.
"	3.	1 Blue-fronted Amazon, <i>Chrysotis æstiva</i> .	..	S. America.
"	3.	1 Tawny Owl, <i>Syrnium aluco</i> .	..	Great Britain.
"	3.	1 Greater Sulphur-crested Cockatoo, <i>Cacatua galerita</i> .	..	Australia.
"	3.	2 Pale-headed Parrakeets, <i>Platycercus pallidiceps</i> .	..	"
"	5.	2 Yellow-bellied Liothrix, <i>Liothrix luteus</i> .	..	China.
"	6.	3 Tickell's Ouzels, <i>Merula tickelli</i> .	..	(India).
"	12.	1 Hutchins' Goose, <i>Bernicla hutchinsi</i> .	..	Arctic America.
"	13.	3 Sonnerat's Jungle Fowl, <i>Gallus sonnerati</i> .	..	S. India.
"	15.	2 Ravens, <i>Corvus corax</i> .	..	(British Isles).

AUG.	16.	2	Hoopoes, <i>Upupa epops</i> .	..	Europe.
..	22.	1	Greater Sulphur-crested Cockatoo, <i>Cacatua galerita</i> .		Australia.
..	22.	2	Sparrowhawks, <i>Accipiter nisus</i> .	..	British Isles.
..	22.	2	Long-eared Owls, <i>Asio otus</i> .	..	Europe.
..	22.	1	Small Hill Mynah, <i>Gracula religiosa</i> .	..	S. India.
..	23.	1	Rook (Albino), <i>Corvus frugilegus</i> .	..	British Isles.
..	25.	1	Piu-tailed Whydah-bird, <i>Vidua principalis</i> .	..	Africa.
..	25.	26	Hybrid Pheasants, between <i>Phasianus mongolicus</i> ♂ and <i>Phasianus colchicus</i> ♀.		
..	27.	7	Rufous Tinamous, <i>Rhynchotus rufescens</i> .	..	Brazil.

A female of the Christmas Island form of the Greenwing Dove (*Chalcophaps natalis*) has paired with a male of the common Indian form (*C. indica*) and a fine young bird has been reared in the new Pheasantry. Another interesting youngster has been hatched by the pair of Wharton's Fruit Pigeons (*Carpophaga whartoni*) in the Western Aviary. It is curious that both these species from this remote little island should be breeding at the Gardens. D. S.-S.

THE SOCIETY'S MEDAL.

Accounts are now published of the breeding in captivity of the species mentioned below. It is believed that these are the first cases in the United Kingdom, and it is proposed to award a medal in each case. Any member or reader knowing of a previous instance is requested to communicate at once with the Hon. Business Secretary.

To Dr. ALBERT GÜNTHER, F.R.S., for breeding the Red-backed Shrike (*Lanius collurio*).

To Mr. WILLIAM FASEY, for breeding the Yellow-rumped Parrakeet (*Platycercus flaveolus*).

To Mr. C. CASTLE-SLOANE for breeding the Talpacoti Dove (*Chamaepelia talpacoti*).

Medals have been awarded to Mr. D. SETH-SMITH for breeding the Scaly Dove (*Scardafella squamosa*) and the Tataupa Tinamou (*Crypturus tataupa*).

SPECIAL NOTICE: Members are reminded that a new volume commences with the November issue, and, in accordance with the Rules, the Magazine cannot be sent to members until they have paid their subscriptions. Members are therefore asked to kindly forward their subscriptions to the Hon. Business Secretary at their earliest convenience.

CORRESPONDENCE, NOTES, ETC.

THE MANAGEMENT OF THE AVICULTURAL SOCIETY.

SIR,—The new rules of the Society carry one step farther the movement which was commenced with the previous revision of the rules, and which appears to have for its object the removal of the affairs of the Society from the control of the general body of the members and the placing of them in the hands of a few.

Believing, as we do, that the original democratic constitution of the Society tended in a much greater degree than the present oligarchic one to the well-being of the Society and the promotion of the science of aviculture, we have decided, if we obtain the necessary number of proposers, to stand for election to the Council in opposition to the official candidates, in order to give the members an opportunity of expressing their approval or disapproval of the new rules. We shall stand simply in support of the principal of popular control, and we now announce our intention, before the names of the official candidates are known to us, in order that we may not be suspected of any personal opposition to them.

HORATIO R. FILLMER,
25th August, 1904.

L. W. HORTON,
August 26th, 1904.

[The new rule relating to the election of the Council was very carefully considered at the recent Annual Meeting of the Council, and it was passed in the belief that it would be to the interest of the Society and of aviculture.

It was thought that a change of blood in the Council each year was necessary. Some of its members had served for many years, and by compelling two members to resign each year, commencing with those who have served the longest without a break, a change is assured. It is absolutely essential that members who serve on the Council shall be friendly toward the Society and have its welfare at heart; and it stands to

reason that the existing Council, who naturally know more of the inner workings of the Society than the other members, are best suited to recommend the two members who are to take the place of those retiring. This is a plan that is adopted by the Zoological and most other societies with perfect success.

It is obvious that a society like ours must be more or less governed by a few. It could not be worked successfully otherwise. We are perfectly certain that any member who takes a keen interest in the Society and the Magazine, and who *has their best interest at heart*, will have no difficulty whatever in being nominated to serve on the Council.

We entirely fail to see that the Society is any more oligarchic now than in the days when Mr. Fillmer practically ran it himself! Every member has a right to use the Magazine, so long as he writes upon suitable subjects; in fact it is difficult to persuade enough members to write—they *will* leave the writing to a few. But it is not the fault of the few if their names appear often. With the coloured plates again, a notice has been inserted requesting members to suggest subjects; whereas formerly the matter was almost entirely left to the Executive Committee.

The chief question to consider is whether the Society and Magazine are a success under the present régime; and we venture to think that all but a few malcontents are satisfied with it. We ask our members to decide for themselves as to whether the Magazine and the Society are any worse off now, when it is said to be in the hands of a clique, than it was in the days of its "original democratic constitution."

What has happened since those days? In 1899 the April and May issues consisted of twelve pages only, "less than ever before since the first year of the Society," as Mr. Fillmer remarked (Vol. V. p. 140). In the volume for 1900 he evidently believed that the days of the Society were numbered if the Magazine were to continue in its present course, for he strongly advocated the inclusion in its scope of Mammals, Reptiles, Fishes, and Canaries. Needless to say the majority of the members strongly objected to such a change, for they believed that there were still many aviculturists, who had never heard of the Society, who would readily join when the Magazine became better known, and that it would some day become an important Society with a Magazine that the members might well be proud of. That they were justified in this belief is proved by the fact that when Mr. Fillmer left the Society there were only 254 members, whereas there are now over 400.

In Volume VII. Mr. Fillmer's name does not appear at all in the list of contributors, although it had been conspicuous in all former volumes. The Report of the Council, published at the end of that volume, announced that Mr. Fillmer had entirely severed his connection with the Society. This was at a time when the Society and its Magazine were at a low ebb,

and it was necessary that a strong effort should be made if it were not to go to the wall entirely.

The Council with one accord put its shoulder to the wheel. Many changes were made; Annual Council Meetings were held; the rules, which were by no means efficient, were revised, and, we hope at least that, the result is a stronger Society and a Magazine of an altogether higher standard. And this in spite of the fact that in October 1901 Mr. Fillmer started a new magazine and a new society, known respectively as "Foreign Bird Notes," and "The Foreign Bird Club," presumably as rivals to the "Avicultural Magazine" and Society. Four months later the F. B. C. joined hands with the "National British Bird and Mule Club," and the Magazine changed its name to that of "Bird Notes," under which title it still exists with Mr. Fillmer at its head; but the British Bird and Mule Club has now broken off its connection with it. Every effort was made to persuade our members to join the F. B. C.; printed circulars, and, in some cases, specimen copies of 'Bird Notes,' were sent to them, and, as a special inducement, members of the Avicultural Society were allowed to join without paying an entrance fee. The natural result of this was that a number of our members deserted us to join the Foreign Bird Club, the annual subscription to which, at that time, was less than that of the Avicultural Society.

In December last, when our Society had reached, by careful management and much hard work at the hands of its officers, an important position, Mr. Fillmer rejoined, and the above communication is his first contribution to our New Series.—Ed.]

THE GREAT-BILLED PARRAKEET.

SIR,—The other day, on my way to the Natural History Museum I looked into a bird shop (Musgrave's) just opposite Harrod's Stores. There I saw what, for a moment I mistook for an Alexandrine Parrakeet, but I soon saw that it wasn't, though the general shape of the bird is like that species, with a large head and very large red-beak, and a short, though somewhat pointed tail. The colour is bright bluish green above, and yellowish green underneath. On the wings are some black feathers edged with yellow, like a red Rosella's back. On a top shelf at the Museum I saw a stuffed specimen of this bird, but, though I climbed on a chair I could not see its name, as the label was turned blank side outwards, like the price tickets of all the most fascinating things in the shop windows.

Yesterday I hunted all over the Zoo. for a parrot like him, but failed to find one. So to-day I went into the shop and asked. The man there told me it is a "Hornbill Parrot from India; the only one in England; has been in his possession eight months; price 13 guineas." He told me he could not find out its scientific name. The beak is very large, but not a bit like a Hornbill's, more like a large red radish, or a small Dutch cheese. Is

it really an uncommon bird? and if so ought not some of the rich or reckless members of the Society to buy it and tell us all about it.

D. HAMILTON.

[The Great-billed Parrakeet (*Tanygnathus megalorhynchus*) of Western New Guinea and the Moluccas. It is decidedly rare in the European bird-market. (See *Parrakeets* page 91).—ED.]

THE DIAMOND DOVE.

SIR,—Seeing that you have been successful in rearing Diamond Doves, I should like to ask you if you will tell me what is the best food to give the young ones; and how long do the old birds sit?

I have a pair in my outdoor aviary, and they have just carried a few heather branches into a small travelling box, and I should think they have been sitting about a week now. I have not seen any eggs, because so soon as one bird comes out of the box the other goes in, and I am afraid of disturbing them. At present I just feed them on white millet seed.

FRANK BATHF.

The following reply has been sent to Mr. Frank Bathf:

Diamond Doves sit about 14 days. I supply no special food for the young ones. The old birds have canary and millet seed, and rear their young quite successfully on this. So long as your pair are undisturbed in any way they will most probably hatch and rear their brood.

D. SETH-SMITH.

NOTES ON SOME BIRDS OF THE WHITE NILE.

SIR,—The Waders which I mentioned in my article, and which Mr. Meade-Waldo has marked as Open-billed Storks, were more like Purple Coots, only chocolate and brown—not the shape of Storks.

The Meyer's Parrots are doing well out of doors, and have got much brighter in colour.

I shall be very glad to answer any questions I can about the birds or country. The whole trip is a most interesting and enjoyable one—and one which I strongly recommend to anyone who is keen about birds—of course we saw it rather to an advantage, as so few steamers had been up the Nile to disturb the birds (ours was the second to do the trip this year).

We also saw a herd of twenty-seven Giraffe, countless Hippopotomi, and about six kinds of Antelopes—all from the steamer—while at Kanissa we saw the tracks of a large herd of Elephants.

There were of course countless birds which I did not know, and so did not mention in my article.

A. C. CHARRINGTON.

"RAVENS BREEDING IN CAPTIVITY."—A CORRECTION.

SIR,—May I correct an obvious misprint in an article of mine in the August number of the Magazine?

On page 292, lines 17 and 18, I intended to have said: ". and supplied freely birch and other branches, wool and moss (the latter never used)."

W. H. ST. QUINTIN.

[Mr. St. Quintin, being abroad, was unable to correct the proofs, and the Editor much regrets that so foolish an error was allowed to pass unnoticed].

POST MORTEM EXAMINATIONS.

RULES.

Each bird must be forwarded, as soon after death as possible, carefully packed and postage paid, direct to Mr. ARTHUR GILL, M.R.C.V.S., Veterinary Establishment, Bexley Heath, Kent, and must be accompanied by a letter containing the fullest particulars of the case. Domestic poultry, pigeons, and Canaries cannot be dealt with. If a reply by post is required a fee of 2/6 must be enclosed.

BENGALEE. (Miss Brampton). (Acute inflammation of the bowels caused death).

RED-FACED LOVEBIRD. (Miss Walfe). Fed on white millet. [Your bird was much emaciated, and I certainly think white millet alone is not sufficiently nourishing. Give the large maize boiled fresh daily, canary and millet seed, and good sound white oats].

GREEN AVADAVAT. (Mr. Tomes). [Fractured skull was cause of death].

RED-HEADED GOULDIAN. (Hon. Mrs. Hodgson). [Your bird died of inflammation of the cloaca through the retention of a fully formed egg, which was broken].

VIRGINIAN NIGHTINGALE. (Lady Harriet Warde). In my possession 18 months. Up to day before death this bird was singing splendidly. I think he was beginning to moult. He was fed on canary, rape, millet, with occasional hemp seed. Bread crumbs, egg at times, currants, Hawkins' soft bill food, and a good deal of fruit, and meal-worms three times a week. [Your bird died of apoplexy. These birds are very subject to fits which are, I think, usually due to over-feeding. They are very hardy, being able to bear our severest winters out of doors with impunity. I have had many and never lost one, and my treatment was as follows. Kept out of doors all weathers. During the summer and warm months of spring and autumn fed on canary, millet, oats, with plenty of fruit, and occasionally some boiled maize, of which they were very fond. During the colder months I gave, in addition to the above, occasionally sunflower seed, and regularly a little hemp and Century food. Thanks for P.O. 2/6].

- BICHENO FINCH. (Mrs. A. K. Connell). [Pneumonia was the cause of death].
- ECLECTUS PARROT. (Mrs. A. K. Connell). Has been ailing with a bad throat for a long time. [The bird died of suffocation caused by a growth at the back of pharynx which had completely grown over the top or opening of the larynx. It is a wonder that the bird has been able to swallow its food for a long while].
- Hen SHAMAH. (Miss Alderson). [The bird had a fractured skull, caused by direct violence. It is quite possible the Quails are the culprits].
- GOULDIAN FINCH. (Mrs. Howard Williams). The bird died of apoplexy. There being a large clot of extravasated blood all over the left side of brain].
- BULLFINCH and GOULDIAN FINCH. (Mr. Teschemaker). [Bullfinch was a hen and died of enteritis. Gouldian died of fatty degeneration of liver. No particulars of feeding, etc., so cannot say if there is any fault in this respect.]
- COCKATIEL. (Mrs. C. H. Williams). [Death was due to internal hæmorrhage from a ruptured abdominal blood vessel].
- CORDON BLEU. (Mrs. Barber). Has been in outdoor aviary from May to end of August. [Your bird had a fit caused by pressure on the brain. There was an extensive blood clot at the lower part of right side of brain].
- YELLOW BUDGERIGAR. (Mrs. Noble). [Concussion of the brain caused death. Budgerigars frequently stampede at night. If one commences they nearly all join in. Whether caused by fright I cannot say, but I have repeatedly heard mine do this].
- WHITE JAVA SPARROW. (Miss E. Bamford). [Your bird died of concussion of the brain caused by direct injury to the skull].
- ORANGE-FLANKED PARAKEET. (Mr. N. O'Reilly). [Your bird died of liver disease of long standing, this organ being nearly twice its normal size. Thanks for P.O. 2/6].
- Eight WAXBILLS. (Lady Carnegie). Arrived from London in apparently perfect health. They were all found dead next morning. They ate ravenously all the day. [All died of infectious (or septic) enteritis. Thoroughly disinfect cage (or if not a valuable one destroy it) before putting any other birds into it].

ARTHUR GILL.

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IV.

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III.

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