

A biographical sketch of Col. George Montagu (1755—1815).

English Field Zoologist

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COL. MONTAGU. The Man so far as he is known.

So little is known about COL. MONTAGU, the well-known English ornithologist and marine zoologist, that it seems well to set forth in order such information concerning his life and work as I have lately been able to collect. It is not a difficult matter to write a life of MONTAGU because the material for a biographical memoir is scanty, being for the most part contained in an article by WILLIAM CUNNINGTON in the Wiltshire Magazine for 1857. Moreover MONTAGU was not a personality requiring any subtle psychological analysis; there are no questions concerning him, hotly debated by critics or enthusiasts, — we have never to decide precisely how much more than a liar or a vagabond he was — as the biographer of ROUSSEAU has to do, nor

whether he was mad — a difficult decision which must fall to the lot of every biographer of Blake. MONTAGU was neither a liar, nor a vagabond nor a lunatic. He started no movement, he was the centre of no new culture. The Preraphaelites or the Transcendentalists will not be called into account. Let the dead bury their dead. COL. GEORGE MONTAGU was just an upright simple-minded, English country gentleman — un cœur simple, in the meaning of FLAUBERT — who loved Natural History with a love which immediately appeals to all who are naturalists rather than to those for whom zoology is only an academic affectation.

EDWARD FITZGERALD wished there were more biographies of the lesser men. It is certainly impossible to claim for MONTAGU anything more than that he was a painstaking and practical field zoologist who helped to lay the foundations of the Natural History of our country. He is distinctly one of the lesser men in the gallery of English zoologists. He was a decidedly common-place individual, clever but not intellectual, industrious but not very brilliant. There were many men, no doubt, in England, in his day of far greater talents-, witty, able and intellectual men, with magnetism of personality and commanding strength of character. Yet none or very few perhaps have left any record behind of their passage through the world. Never a whisper reaches us that ever they lived and died. Fame is uncertain and too dependent on the chance play of circumstances ever to occupy the mind of thoughtful men for long. Who ever would have heard of AMIEL if he had not formed the diary habit, or of MENDEL if de Vries, Correns or Tschermak had not rediscovered him? It may perhaps be food for the reflective cynic to be told that nevertheless the memory of MONTAGU, one of the lesser men, is perpetuated. Yet I am disposed to believe that MONTAGU was one of those men whom FITZGERALD meant when he said that more biographies of them were very desirable.

There is no gainsaying his enthusiasm for zoology, for in 1789 he wrote to GILBERT WHITE that were he not bound by conjugal attachments he would have liked to ride his hobby into distant parts. The zeal indicated in the letters and proved by the extent of his researches made in the troublous times of the end of the 18th and beginning of the 19th century perhaps suggest to the reader at first a virtuoso so entirely immersed in his studies as to be careless of the destiny of his country and

ignorant of the perils besetting her — a Nero fiddling while Rome burnt. But nothing is further from the truth. MONTAGU was sufficiently old fashioned to be a patriot. He was a soldier who fought for his country and believed in the martial axiom that might is right. The fact is he was a Colonel, an upright and honourable man with a mind perhaps a little too conscious of its own rectitude, very susceptible to outrage and a temperament somewhat irate according to type.

Critics before and since the days of the "tartarly Quarterly" were apt to be outspoken and MONTAGU'S Ornithological Dictionary appears to have received some severe treatment from the reviewers on its first appearance for in the introduction to the Supplement which appeared some years later he concludes with a plea for leniency towards errors caused by a slip of the pen or by typographical delinquencies. Then he goes on, in the grand manner, "From those whose pen sips no other drink but gall, we have no more expectation of favour than from the hand of an assassin continually imbued in blood. Their trades are somewhat congenial, (sic) each stabs in the dark and are too frequently actuated by similiar motives." No one but a Colonel could have written thus.

If the truth must be told MONTAGU was not the master of a very perfect style nor of a very perfect grammar. A reviewer of the Supplement, writing in the Monthly Review for August, 1817, enters a protest against the legitimacy of such modes of expression as: — "it was thought most advantageous to the public to give it in its present state than to wait," "innumerate," "ossious," "delatable," "feathers which characterizes," "curviture," "the coverts of the ears is," "a projecting callous," "its rarity and extreme locality has been," "where there was scarcely any membranous divisions," "the size and weight is," "a mucous membrane," "it should seem the shag is subject to vary in the form of their occasional crest," "must be very different in Picardy than in Sussex," "neither BRISSON nor BUFFON appear to have," "the mottled appearance of old and new feathers are," "the same indicative of immaturity," — whence it appears that the Colonel found the problems of grammar and spelling for more intrac-table than the problems of zoological science with many of which he so ably dealt. So far as the spelling goes he sinned in good company — DICKENS and R. L. STEVENSON could not spell

to mention only two. And the grammar is excusable when one remembers that MONTAGU was only 16 years old when he joined the army. He was married by the time he was 18, fighting in America when he was 19 and at the age of 20 he was already a father, so that in early youth, — when all things are possible, — MONTAGU was far too much occupied with the more pressing duties of life to be in a position to acquire a pure English style, the development of which means a very different psychological climate from love, marriage and war at the age of 19.

Here are some examples of his style: —

“In the month of December, 1805, a small flock of these birds were observed busy in extracting the seeds from the Alder trees, in the South of Devon, several of which were shot.”

“With all these reflections formed on the known laws of nature, evinced by daily experience, we can have no more doubt of the identity of these two shrikes as distinct species than we have that they are different from the cinereous shrike”

However, no critical strictures ever brought MONTAGU to his knees. He never knows when he is beaten. He gaily begins his introduction to the Supplement with the following remarks illustrating the admirable pride he took in his own work: “Since the publication of the Ornithological Dictionary we have continued our observations upon the characters and habits of British birds with the usual ardour and indefatigable research. It might appear arrogant in us to enlarge upon the advantages science may have derived from discoveries we have made but we venture to say that a considerable portion of new and interesting matter will be found concerning the economy, habits, changes and variations of species not published before.” A few commonplace remarks follow about our common aptness to err and then, jejunely, “Truth is the goal at which we aim. It is the essence of all human knowledge,” which unfortunately is scarcely true.

His authoritative biographer, CUNNINGTON, gives us a few details about his personality and habits. We read that although he was of ancient and honourable descent he founded his claims for respect upon individual merit rather than upon his noble ancestry. He disliked pomp and ceremony of any kind and preferred to live a quiet secluded life spending his days beating

through thick brushwood to identify the song of a Woodwren or collecting seaworms from the mud at Kingsbridge or dredging in Tor Bay. To his favourite pursuit he very rarely alluded in conversation unless it was introduced by others. He was a great talker with a wide knowledge of affairs and extensive general information. He always kept his word, he was always punctual, punctilious over questions of fact, precise in his methods of work, indefatigable in industry and regular in his mode of life. Small as it is, this evidence, is almost overwhelming in its support of the suggestion that MONTAGU was a good type of the average man of science — accurate, thick-fingered, laborious, practical, excellent. At the close of his career, he bore his sufferings with the “equanimity of a philosopher” and with the “fortitude and resignation of a true Christian.”

The Colonel belonged to the old and honourable school of naturalists who were accustomed to work out their researches to a barren conclusion by resigning all they could not understand to the power of the Omnipotent Creator. Their memoirs used to end in a few complimentary remarks to God. Hervey himself said that at one time he thought the circulation of the blood could only be understood by God. The squibs of such “scoffers” as LAPLACE, VOLTAIRE, HAECKEL and SHAW he would have called blasphemies for MONTAGU was one of the old brigade who accepted the defiant “I am that I am” with a bowed head, studying animal life in the pious opinion of good Sir THOMAS BROWNE who wrote, “The wisdom of God receives small honour from those vulgar heads that rudely stare about and with a gross rusticity admire his works. Those highly magnify him whose deliberate research into his creatures returns the duty of a devout and learned admiration.” In conclusion I ought to mention that MONTAGU was an authority on sport and duelling. Although we have no definite facts to go upon it seems probable that he was an expert duellist. His Sportsman’s Directory contains many curious passages of instruction in the art of fighting a duel.

An old friend, the Rev. K. VAUGHAN of Modbury (Aveton Gifford) was at his bedside during his last illness. On being asked where he wished to be buried, he replied, calmly, “Where the tree falls there let it lie,” which shows that he was able to meet even the Last Enemy with a stout heart.

THE FACTS OP HIS LIFE.

The life of MONTAGU was not altogether a long and delectable picnic.

He was born at Lackham House, Wilts, probably in 1755 (CUNNINGTON) though the Dictionary of National Biography gives the year as 1751. He had 12 brothers and sisters, the children of JAMES MONTAGU, of Lackham and Elinor, the sole surviving daughter of William Hedges, of Alderton. His mother was the grand daughter of Sir CHAS. HEDGES, Queen Anne's Secretary, while his father was descended from JAMES MONTAGU, the third son of Sir HENRY MONTAGU, 1st. Earl of Manchester. Lackham House, the fine old family mansion, has since been destroyed by fire but it was at the time full of interesting curiosities. Nothing of his childhood is known but at the age of 16 MONTAGU entered the army and subsequently started for America when he was 19 years old to fight in the war of the American Colonies. He was promoted to be Captain in the 15th. Regt. of Foot. It was in America, where he probably remained no longer than 12 months, that he first began to shoot and collect birds, a few of which he prepared with his own hands though with no further intention than that of presenting them to his wife when he returned home. He had, when he was only 18, married Anne, the eldest daughter of WILLIAM COURTENAY and Lady JANE, his wife, who was one of the sisters of the *Earl of Bute*, Prime Minister to George III. He had four sons and two daughters (CUNNINGTON). The Dictionary of National Biography states that there were only two sons and two daughters. Three of his sons died abroad, JAMES became a prisoner of war in France, JOHN (in the Royal Navy) was killed while on active service and FREDERICK fell at Albuera. The later years of his life were much overcast by the loss of his sons. He erected in the Parish Church of Lacock a tablet inscribed with a touching epitaph written, I should think by himself, in memory of his son Frederick's worth and his father's grief.

It ran: —

"TO FREDERICK AUGUSTUS COURTENAY MONTAGU, Capt. of the 23rd. Regt. of Royal Welsh Fusiliers and Major in the Portuguese service. Adorned with the choicest gifts of Heaven, Nature had wreathed the olive branch that so conspicuously flourished on his brow as emblematic of his amiable and affectionate

mind. Patriotism and loyalty that roused him to seek martial glory led him to volunteer his service to his country's cause at the early age of 16, and after displaying undaunted courage in Holland, in Martinique, in the expulsion of the French from Portugal, and lastly at the age of 26 at the memorable battle of Albuera in Spain, fought on the 18th. May in the year 1811, he finished his mortal career, pierced through the heart by a musket ball, whilst gallantly leading his men to a charge. He nobly fell leaving the laurels so gloriously acquired to be entwined round the hearts of his afflicted parents who in commemoration of their departed son, erect this monument."

MONTAGU lived for sometime at Easton Grey, near Malmesbury, where the last of his children was born. After the death of MR. HEDGES he went to live at Alderton House where Mrs. MONTAGU'S mother — Lady JANE COURTENAY joined them. On receiving an addition to his income on the death of his brother, JAMES, who died unmarried, he was able to resign his commission of Colonel in the Wilts Militia and went to live at Knowle, Kingsbridge, South Devon, where most of his best work was carried on. JAMES MONTAGU'S will was a disappointing affair as the Colonel expected that the family estates would have been left to him, but he only had "a rent charge of £ 800 a year subject to which the estates were left to his eldest son, George, for life. The sum of £ 25,000 had been borrowed by the testator on bond from the late Lord Chief Justice ELLENBOROUGH to enable him to complete the purchase of Pewsham Forest adjoining the Lackham estates and a provision was made in the will for the gradual liquidation of the debt. It was out of this document that arose the lawsuit between the Colonel and his eldest son. Father and son were arraigned against each other and from what may be gathered it seems that the son was a very extravagant youth. The prolonged litigation coupled with the young man's extravagance ultimately deprived the family of their estates. The affair was thrown into chancery and the Colonel "had the mortification of seeing" all the fine old timber on the estates which had been estimated at £ 70,000 cut down and "the valuable libraries and books and the collections of relics and curiosities sold and disbursed under the decree of the Court." It is not difficult to imagine how dreadfully outraged the Colonel felt at these calamitous events. The whole history is certainly a tragedy, a com-

monplace every day tragedy perhaps, but just such an one as a great modern writer has brought us to see loom out quite as black as one that is obvious, blatant and acclaimed. The whole story of MONTAGU'S life, his early marriage, so soon after succeeded by a painful separation from his wife to fight in America, his love for his son FREDERICK, his uprightness and patriotism, his simple habits, the mistake of the will, the loss of the timber and estates and the quarrel with GEORGE are all a little reminiscent of the idyllic qualities and atmosphere of the "Vicar of Wakefield."

There was money enough however for MONTAGU to live in quiet; and at Kingsbridge, the latter years of his life were spent in seclusion and study, broken only by the intermittent excitement caused by the presentation of his memoirs to the Linnean Society or by the publication of his books or the *staggering* discovery of a new beast. He died of lockjaw in 1815 after treading on a rusty nail. Mrs. F. M. CRAWFORD, his daughter, stated that his collection of birds was disposed of to the British Museum for the sum of £ 3,000 after his death. On the recommendation of Sir Joseph Banks the Sum actually paid was £ 1,200.

THE NATURALIST.

MONTAGU is not a star of any magnitude in the firmament of illustrious zoologists who have passed away. I cannot even claim that like PATRICK MATTHEW, he anticipated DARWIN in the theory of natural selection, or that like SPALLANZANI he made any contributions to the classical controversy of spontaneous generation, but English field naturalists have always apportioned him his true value as a man who was among the first to observe and describe with accuracy the many singular and interesting animals inhabiting the British shores and countryside at a time when there were few other workers and they, for the most part, producing researches of inferior quality.

Professor EDWARD FORBES wrote of him: — "MONTAGU'S eminence as a naturalist depended upon his acute powers of observation and the perspicuous manner in which he regarded the facts which came under his observations. He excels as a describer and all his accounts of the animals which he noted are

clearly and truthfully drawn up. He avoided wordiness yet his descriptions are never so brief as to be obscure. I have had occasion chiefly to test the observations of MONTAGU in cases where marine animals were concerned and have been astonished at the extent, variety and minuteness of his researches. He laboured at a time when there were few persons who took an interest in marine zoology or who cared to investigate the structure and habits of submarine animals in their native haunts. MONTAGU however did not shrink from his work because he met few companions or found little sympathy. He steadily pursued his chosen task and laid the foundation of that thorough investigation of the Natural History of the British seas which now forms so distinctive and appropriate a feature of the science of our country. For my own part, I have derived the greatest benefit from the work and essays of MONTAGU and am now happy to be able to record my acknowledgements to one of the most eminent practical naturalists of his age."

YARRELL, RENNIE, FLEMING, SELBY, DAY, all bear testimony to the value and ability of MONTAGU's work.

It is natural to compare MONTAGU with his more famous contemporary and correspondent, GILBERT WHITE, of Selborne, the association being more by contrast than by similarity, for the difference between the two men is clear and definite. MONTAGU possessed the severely scientific habit of mind which mentally photographs and faithfully records phenomena. WHITE was a naturalist who loved the birds and when writing about them was able to impart to his work the impress of his own rare personality. WHITE is read by everyone. MONTAGU is known only to the few. Oblivion inevitably waits for the man of science who is only a recording machine. A Grecian urn or a lyric by Colonel Lovelace are as fresh and stimulating today as they were at the time of their creation. And the creation of enduring scientific work requires as much imagination as poetry or art. MONTAGU's work was colourless and that is perhaps its principal deficiency. As that of a sound practical naturalist, his pioneer work can never be ignored by students of the English fauna. Above all he kept burning to the last the altar fires of a grand enthusiasm. And enthusiasm, even for crabs, starfish or patent pills—to use the classification of a latterday cynic—has something in it which is divine.

(a) MAMMALS.

MONTAGU wrote a pleasant account of the Natural History of the Mouse Harvest (*Mus minutus*) confirming and elaborating some of GILBERT WHITE'S observations. But his chief contributions to our knowledge of the Mammalia consisted in his observations on Bats, particularly the two species *Rhinolophus ferrum-equinum* and *R. hipposideros* which he proved to be distinct species and added to the British list. He discovered a colony of these bats in the famous cavern at Torquay known as "Kent's Hole" and has written a very careful account of them pointing out their structural characters and mode of life. The Barbastelle (*Synotis barbastellus*) was first discovered by MONTAGU in England in 1800 though Sowerby first recorded it in 1804. In the Memoirs of the Wernerian Society of Edinburgh, he figures the skull of a *Delphinus* which had been caught in the River Dart and was then exhibited at Totnes but which did not reach MONTAGU'S hands before it had been boiled down and its bones thrown into the River. A correspondent of MONTAGU dredged the River and recovered the skull. It is described as a new species, *Delphinus truncatus*, which is the *Tursiops tursio* of Gervais (the Bottled nosed Dolphin), — rare on our coasts.

(b) BIRDS.

It is impossible even for ornithologists to give MONTAGU anything except praise for his valuable contributions to British ornithology. His fame as a naturalist rests chiefly on his Ornithological Dictionary published in 1802. In 1831, the second edition was published edited with remarks and introduction by JAMES RENNIE, Professor of Natural History at Kings College, London. Many years later EDWARD NEWMAN, one-time editor of "The Zoologist" brought out another edition, rewriting almost the whole of the original work and incorporating the additional species of birds that had been since described by SELBY, YARRELL and others.

Professor ALFRED NEWTON'S Dictionary of Birds is also planned on the same lines as the Ornithological Dictionary but unlike the latter it is devoted not only to the birds of Great Britain but to the birds of the world. At the time it was written MONTAGU'S book was an excellent compendium of the knowledge which had

at that time been obtained concerning the structure, life history and habits of our British birds. He strictly attended to the changes in plumage, incidental to age, sex and season and in this way he was able to prove the invalidity of many so called species and on the other hand to confirm the separation of other closely allied birds under different specific names. His work with the birds was not confined to systematic research. The Colonel scoured the woods and fields and made some very careful observations on the habits of all those species which he happened to meet. He also kept a number of birds alive in captivity in order to study the sequence of their plumages. The MONTAGU Collection of British Birds in the British Museum has caused considerable anxiety as none of the specimens were properly prepared, many being attacked by mites and falling to pieces.

Quite apart from the ornithological interest of the Dictionary the reader who takes the trouble will find in it many amusing passages. MONTAGU perhaps is seen at his worst when he is attempting to describe such difficult subjects as the song of the nightingale. He writes "The variety of this bird's notes certainly exceeds all others. Of a still summer night when all is hushed in silence the vocal powers of the nightingale is (sic) most distinctly heard." However, ISAAC WALTON who knew how to write of the nightingale's song better than MONTAGU was but a sorry naturalist.

It is curious to note that, like kings and reviewers, MONTAGU always speaks in the plural number, as was noticed by a reviewer at the time of its publication.

The following is a short summary of some of the more important facts which MONTAGU brought to light. He proved that the "Crested Cormorant" is only the full plumage of the Common Cormorant (*Phalacrocorax carbo*). He first made known to the scientific world the beautiful Roseate Tern, which he called *Sterna dougalli* in honour of Dr. M. DOUGALL who first sent him specimens from the Cumbræes in the Firth of Clyde. One of these is still preserved in the British Museum. Selby subsequently found it breeding on the Farne Islands. He carefully separated the Gull-billed Tern (*Gelochelidon anglica*) from the Sandwich Tern (*Sterna cantiaca*) and showed that the "Greenwich Sandpiper" was only one of the many varieties of the Ruff (*Machetes pugnax*), also that the "Ashcoloured Sandpiper" is the same bird as the Knot

(*Tringa canutus*). He gives an excellent account of the Ruff which he kept in confinement for many years. MONTAGU disposes of both the "Brown Tern" and the "Brown-headed Gull" which he shows to be only the young in immature plumage. "The Winter Gull" is also correctly represented as the Common Gull (*Larus canus*). The type of the American Bittern (*Botaurus lentiginosus*) which he made known in 1813, is in the British Museum. MONTAGU claimed to have been the first to discover the cause of the distemper in chickens known as the "gapes". It is sometimes said that Mrs. Blackburn ("Nature", 1872, Vol. 5, p. 383) was the first to confirm Jenner's controverted statements about the Cuckoo's ejection of the young of the foster parent. But it appears that Montagu corroborated Jenner's statements as early as 1802 in his Dictionary where he tells us that his own observations were actually made before Jenner's

He corrected the mistake of "that celebrated author Mr. Pennant" over the "Brown Owl" which was only a variety of the Tawny Owl (*Syrnium aluco*). He settled the matter by killing this bird from the same nest as the Tawny Owl.

It is interesting to find him writing that the Osprey (*Pandion haliaëtus*) "seems to be more plentiful in Devonshire than in any other part of the Kingdom" and "has been shot almost every year." While crossing the River Avon, at Aveton Gifford in 1811 he watched one hawking for fish.

He proved that the Scaup Duck (*Fuligula marila*) previously confused under two species was sexually dimorphic, one "species" being the male and the other the female. On the subject of migration he believed that the majority of Swallows migrated but that some were detained by accident and became torpid and perished before the return of the warmer weather. It is to be observed that he did not embrace GILBERT WHITE'S heresy of hibernation. The first adequate account of the Dartford Warbler (*Melizophilus undatus*), discovered by LATHAM in Kent came from MONTAGU'S pen. He added the Cirl Bunting (*Emberiza cirius*), the Little White Heron (*Ardea garzhetta*), the Red-breasted Snipe (*Macrorhamphus griseus*) and the Little Gull (*Larus minutus*) to the British list and includes the Great Black Woodpecker (*Picus martius*) "with considerable doubt." MONTAGU was an extremely careful man.

One of the best of his contributions to the Wernerian Society was his paper on the Gannet (*Sula bassana*) in which a

distinct advance on previous work was indicated for MONTAGU here proceeds from a study of structure to the study of function and is well on his way to the ideal combination of the two.

(c) FISHES.

MONTAGU'S ichthyological work was almost entirely faunistic but he made known several very interesting new fishes and added a considerable number to the list of British fishes. DAY, in his well-known "British Fishes" remarks on the Gurnard that LINNAEUS by a slip of the pen describes *Trigla hirundo* as "linea laterali aculeata" which caused Pennant and others to describe the side line as rough and this again doubtless induced Montagu to describe his fish without a rough lateral line as a new species. He called it *T. laevis* "at once distinguished by the smoothness of the skin." MONTAGU'S Sucker (*Liparis Montagu*) was discovered by MONTAGU at Milton, on the South coast of Devon. The Gilthead (*Pagrus auratus*) was another of his discoveries specimens being received from Torcross. He made a special study of the Rays and wrote an excellent account of the British species in a paper contributed to the Wernerian society. He took the rare Chagreen Ray (*Raia fullonica*) of the South coast of Devon and was the first to describe *Raia microcellata*. At Salcombe Bay, MONTAGU captured the first two British species of *Cepola rubescens*. At Torcross he added the beautiful Butterfly Blenny (*Blennius ocellaris*) to the British list. In his account of a *Leptocephalus* he corrects some of Pennant's descriptive details helping to dispel the scepticism which prevailed as to the existence of this fish. His "Silver Gade" is a name which he bestowed on what has since proved to be the young of the Threebearded Rockling (*Motella tricirrata*). *Blennius galerita* was another of his South Devon captures and is now known as "Montagu's Blenny" in his honour.

(d) MOLLUSCA and WORMS.

By his indefatigable work and great industry MONTAGU was able to make very considerable additions to our knowledge of British molluscs. In his Testacea Britannica, he enumerated nearly 470 species upwards of 100 of which had not been described before or else were then for the first time ascertained to be

British. Recent lists of British Mollusca published by the Conchological Society show that his name stands by no less than 72 species and 16 varieties 7 species, and 4 varieties being non — marine. Turton named the genus *Montacuta* after him (E. W. SWANTON). Sixteen coloured plates accompany his work in which the author adopted the Linnean system, deviating from it in placing many Linnean Helices in the genus *Turbo* and arranging all the depressed species of the former with regard to the shape of the aperture. MONTAGU sensibly, perhaps necessarily wrote it in the English language so that he must not be considered as following the Linnean manner of description. Of course he included *Serpula* and *Lepas* in his book and thus lost a great opportunity. His researches were not confined to the closet for as he himself says he drew the hidden treasures from their native sites.

He also collected a number of Polychaet worms and a posthumous paper in the Linnean describes five new species of *Terebella*. He gives an account of the "extraordinary vermis" "*Gordius marinus*" or Sea Longworm, in the description of which however Borlase, the Cornish historian, precedes him and thus holds the honour of being the first man to describe a Nemertine. MONTAGU, too, was familiar with the *Sipunculus* which lives in the empty shell of *Chenopus pes-pellicani* and which lessens the size of the hole by stopping it up with sand.

(e) CRUSTACEA.

Among the Crustacea MONTAGU carried on a considerable amount of work. He discovered and described *Callianassa subterranea*, and also its parasitic Isopod, *Ione thoracica*. *Callianassa* did not turn up again for a long time and the Rev. CANON a. M. NORMAN who visited MONTAGU's hunting grounds many years later failed to rediscover it. Since then however, Messrs. SINEL and HORNELL have obtained it at Jersey and it is reported to be not rare at Naples. A very remarkable amphipod, which MONTAGU discovered and described under the name *Omisca testudo* and which is now known as *Percionotus testudo* (MONTAGU) up to the time of CANON NORMAN's visit to South Devon had not been recorded from any other part of the British coast. Yet in 1875, CANON NORMAN obtained a specimen where the old British naturalist had procured it 67 years before. MONTAGU was able to justify the validity of the species of many of "Mr. PENNANT's crabs", describ-

ing many new species himself, including *Ebalia tumefacta*. The Pycnogonid *Phoxichilus spinosus* is also MONTAGU'S species.

(f) ECHINODERMS.

Our author devoted less attention to these fascinating creatures than one would have expected. However several Holothurians stand to his credit, and also the Ophiuroid, *Ophiocnida brachiata* (Montagu), LYMAN, which CANON NORMAN obtained again in Salcombe Bay.

(g) SPONGES.

MONTAGU'S work in the Sponges is very good as far as it goes. Systematic work on the sponges was however an unfortunate choice, as in those days so little was known about the structure and physiology of sponges that systematists as a rule seized upon only the least important of characters, such as size and shape, etcetera. Thus, MONTAGU, in his *Spongia Brittannica* divides the sponges into (1) Branched (2) Digitated (3) Tubular (4) Compact (5) Orbicular. Many of his descriptions are meagre and incomplete though almost invariably accurate as far as they go. From a table prepared by CANON NORMAN for Vol. IV of BOWERBANK'S *British Sponges* it appears that he described in all 11 new species of British sponges which must have meant energetic work in such an "occult science" as MONTAGU called it.

Two letters written by Colonel MONTAGU to GILBERT White of Selborne.

Easton Grey,
Nr. Tedbury,
Gloucestershire.

May 21st. 1789.

Sir,

Although I have not the pleasure of being personally acquainted with you, yet I flatter myself you will pardon this intrusion of an enthusiastic naturalist. I have been greatly entertained by your *Natural History of Selborne* in the ornithological part of which I find mention made of three distinct species of willow wren. Can you inform me if they are (besides the common) the larger and lesser pettychaps of Latham, neither of which is described by Pennant in his *British Zoology*. He describes a species with the inside of the mouth red which I cannot make out in this country; those two of Latham's I believe I have got so far as I can judge from the description that gentleman favoured me with; but his sedge-wren I am at a loss for as he describes the

sedge-bird besides of the "British Zoology". I should esteem it a particular favour if you have it in your power, if you will favour me with the weight and descriptions of the two uncommon willow wrens. I was induced to take this liberty as you say you are a field naturalist and perhaps may have it in your power to assist me in my present pursuit. I am collecting and preserving the birds and eggs of these parts, a provincial undertaking on which I am got forward; and as those of Hampshire and Wiltshire are nearly congenial (the coast excepted) some species, I presume are more frequently met with about you than with us. Will you excuse my mentioning a few that should they fall in your way you will confer a considerable obligation on me by favouring me with them. The hawks and the owls are difficult to get. Of the former I want all except the sparrow, kestrel and common buzzard; of the latter all the eared and the little owl. The great butcher bird and wood chat, goatsucker, crossbill, aberdevene, siskin and spotted gallinule with many cloven and webfooted water birds together with any of their eggs; and as you mention snipes and teals having bred near you their eggs would be highly acceptable with others not common which you may be able to obtain. And in return, sir, if there is anything in my former or future researches that can afford you any satisfaction I shall with the greatest pleasure communicate. That amiable and excellent naturalist, Mr. Pennant, has done me the honour to say I have discovered some things to him he was not before acquainted with; and I flatter myself I have other notes in store when I have time to write to him more largely on the subject.

This you know is the busy season for the naturalist and the days are not half long enough for me. A fine morning called me from this and on my walk my ears discovered a note I had never before heard. I pursued it into the thick of a wood and with much difficulty killed the bird as it was delivering its song (if I may so call it) from the branch of an oak tree. It proved to be a willow wren; its note was very different from any I had ever heard before, somewhat resembling the note of the blue titmouse; it was continued without variety like the grasshopper or lark but not quite so quick or shrill nor of so long duration; between each song the pause was considerable. The note I confess has staggered me, but its appearance, song, etc. discovered nothing new. The common wren I well know, has very distinct songs. The first after their arrival, before they are paired I considered as their love call the other their soft courting or amatory song. As to the shades of colour and size this species varies considerably: that of the male is much brighter and stronger than the female and it is considerably larger and even in the same sex there is a visible difference. I last year killed a male and female together when the former was in pursuit of the latter on her first arrival in the spring. (As I suppose you know all our male migrating birds precede the female in their vernal visit.) In these the great disparity in weight and difference of colour would have puzzled exceedingly had I not some time before the barbarous act was committed paid attention to the addresses of the male. I confess I am not acquainted with the one you describe with the primaries and secondaries tip't with white and if you are still of opinion that it is a distinct species I should be obliged to you for it. If you should favour me with any small bird at this season it will be advisable

to wrap it up in soft paper sprinkled or damped with vinegar, first laying the feathers smooth and then cover with thicker paper wetted with the same: this will preserve the bird moist and defy putrefaction. The larger birds should be carefully opened with a sharp knife from the vent upwards laying the feathers back with damp paper to prevent their being blooded in taking out the intestines; a little alum or nitre should be thrown in and the incision stopped with tow; and if a little of the alum and tow were put into the mouth it would ensure its coming to me in good order. If you have any conveyance to Bath and you will take the trouble of directing a box or basket to me to the care of the Right Honourable Lady Jane Courtney, Milsom St., Bath, I shall get it the day after it arrives there. Notwithstanding my post town is Gloucestershire I live in Wiltshire where I shall be happy to obey any commands from you and remain, sir,

Your most obedient humble servant

G. Montagu.

Easton Grey,

June 29th. 1789.

Dear Sir.

I am exceedingly obliged to you for your polite favour and hope you will excuse the mistake of the address. I am not able to boast of being an ornithologist so long as you though I have delighted in it from infancy, and was I not bound by conjugal attachment should like to ride my hobby into distant parts; yet I agree with you that naturalists in general attempt to explore too wide a field and their researches are too extensive, whereas if persons well qualified were to confine themselves to particular districts the natural history compiled from provincial authors would no doubt throw much light on the subject.

I confess myself greatly obliged to your work for the discovery of the *third* species of *willow wren* and for the first determined separation of the other two species with whom I was perfectly well acquainted as to their notes but suspected that the same bird might produce both notes promiscuously.

Your work produced in me fresh ardour and with that degree of enthusiasm necessary for such investigations I pervaded the interior recesses of the thickest woods and spread my researches to every place within my reach that seemed likely. I was soon convinced of two distinct species not only in their song but in their size, colour, eggs and materials with which they build their nests. The third species which you seem to think peculiar to your beechwood I flatter myself I have at last discovered to be an inhabitant of this part but they are very scarce and partial. Three only have I discovered; two of which I brought down with my gun from the top of tall oak trees in a thick grove interspersed with brambles. From the reiterated note somewhat resembling the blue titmouse and their colour being more vivid than the other species I do not hesitate to pronounce it that discovered by you though mine did not possess any white on the tips of the quills or secondary feathers; but the belly was pure white and the action of its wings agrees with your description: besides the note it commonly uses which is somewhat grasshopper-like it produces a shrill note five or six times repeated sounding like the

marsh-titmouse. One pair of these birds I only know of about this neighbourhood now, the nest of which I have not been fortunate to discover; if one should come across you it would be an acquisition to me. You are perfectly right in saying the name of the willow-wren is very inadequate. I wish you had given them distinct names as I believe you have the merit of the original discovery. Pennant makes no mention of this acquisition to ornithology, as your letter of the 17th Augt., 1768 long preceded his last edition. Do you know if Latham has adopted them in his "Systema ornithologiae" which is to come before the publick next winter? I am at a loss for your blue pigeon hawk especially as you say its female is brown. From its place of resort I should conceive it to be a hen harrier and that you had not corrected the mistake of other ornithologists and which Pennant fell into in his first ed. where he gives the ringtail for its female. Their habits and manners are nearly the same. Only the latter perches on trees occasionally; its white rump always distinguishes it from all others when skimming over the surface of the earth like the hen harrier: it makes its nest on the ground. Both these species we have not preserved not having been able to procure them being scarce and shy. Perhaps I may be favoured with them from you as well as their eggs another season if not this. If your pigeon hawk should be different I should be obliged to you for further explanations as I am not acquainted with it by that name. The hobby that I want has been called the blue hawk by some. Its eggs I should be glad of and are no doubt to be found in your extensive woodlands; they are scarce with us. You are surprised at my requesting of you the goatsucker. 'Tis true many parts of this country produce them, but they are not to be commanded; and one bird in the spring or before Augt. is worth twenty after that time as most birds are then out of feather and the young ones are seldom in full or proper plumage until the winter and many until the ensuing spring. In the latter end of October birds have mostly done moulting and are again fit for preservation; many scarce birds are at all times acceptable until a better supplies its place. Since I wrote I have killed a male goatsucker and as I have seen a female it is probable I may get it, but the egg I despair of in this part.

I remain, dr sir, your much obliged and faithful humble servant

G. Montagu.

The following is a list of Montagu's publications:

1. The Sportsman's Dictionary, or a Treatise on Gunpowder and Firearms. London, 1792, reprinted 1803. 8^o.
2. The Ornithological Dictionary, 1 vol. 8^o, 1802. Supplement to the preceding 1813, printed at Exeter by S. WOOLMER. A 2nd. edition publ. in 1831 with remarks and introduction by JAMES RENNIE, Prof. of Nat. Hist., King's College, London. Subsequently in 1866, EDWARD NEWMAN, at this time Editor of the "Zoologist" brought out another edition, incorporating the additional species described by SELBY, YARRELL and others. Prof. ALFRED NEWTON'S Dictionary of birds is written in Dictionary form but it treats of the birds of the world and not of Great Britain alone.

3. Testacea Britannica or the Nat. Hist. of Brit. Shells, marine, land and fresh water including the most minute, systematically arranged and embellished with figures. 4^o, London, 1803. Supplement to the preceeding, 1809.

Contributions to the transactions of the Linnean Society of London.

4. 1796, Vol. IV, Descriptions of 3 rare species of Birds.
 5. 1802, Vol. VII, Descriptions of several marine animals found on the coast of Devon.
 6. 1803, Vol. VII, On species of British Quadrupeds, Birds and Fishes.
 7. 1805, Vol. IX, On the Larger and Lesser Horseshoe Bats proving them to be distinct with a description of *Vespertilio barbastellus* taken in the South of Devon.
 8. 1807, IX, On the Nat. His. of *Falco cyaneus* and *Falco pygargus*.
 9. 1809, IX, On several new and rare animals principally marine discovered on the South Coast of Devon.
 10. Ibid. On some new or rare Brit. Marine Shells and Animals.

Contributions to the Wernerian Society's Transactions.

11. 1811, Vol. I, Observations on some peculiarities observable in the structure of the Gannet and an account of an insect discovered to inhabit the cellular membrane of that bird.
 12. Ibid. An account of a species of *Fasciola* which infests the trachea of poultry with a mode of cure.
 13. Ibid. An account of 5 rare species of British Fishes.
 14. 1818, Vol. II, An essay on Sponges with descriptions of all the species that have been discovered on the coasts of Great Britain.
 15. Ibid. An account of Several new and rare species of Fishes taken in the South coasts of Devon with some remarks on some others of more common occurrence.
 16. 1821, Vol. III, Description of a species of *Delphinus* which appears to be new.

Two posthumous papers in the Transactions of the Linnean Society.

17. XIII, 19. On the Black Stork.
 18. XII, 2, 340. On 5 Brit. Species of *Terebella*.

LITERATURE.

- (1) A Memoir of Col. Montagu, by William Cunnington, F. G. S., Wiltshire Magazine, 1857, May, p. 87.
 (2) Dictionary of National Biography.
 (3) Col. Montagu, by E. W. Swanton, Journ. of Conchology, July, 1908.
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I am indebted to the Rev. E. H. GODDARD, to Mr. T. A. COWARD, F. Z. S., and Mr. G. BATHURST HONY for their kind assistance to me when collecting the notes for this paper.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

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