This article was downloaded by: [University of Glasgow]
On: 01 January 2015, At: 13:09
Publisher: Taylor & Francis
Informa Ltd Registered in England and Wales Registered Number:
1072954 Registered office: Mortimer House, 37-41 Mortimer Street,
London W1T 3JH, UK

Annals and Magazine of Natural History: Series 1

Publication details, including instructions for
authors and subscription information:

<http://www.tandfonline.com/loi/tnah07>

VI.—Notes on birds

T.C. Eyton Esq. F.L.S.

Published online: 21 Dec 2009.

To cite this article: T.C. Eyton Esq. F.L.S. (1846) VI.—Notes on birds ,
Annals and Magazine of Natural History: Series 1, 17:109, 26-29, DOI:
[10.1080/037454809496436](https://doi.org/10.1080/037454809496436)

To link to this article: <http://dx.doi.org/10.1080/037454809496436>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

vures, alternating with luteous ones placed on the folds between the nervures, these preceded by a submarginal series of black spots; there is a luteous spot on the disco-cellular nervule, and a faint one of the same hue between the median and radial nervures.

Head varied with white and black; antennæ black, spotted with white.

Thorax and abdomen yellowish white.

In the collection of the British Museum.

Allied to *P. Calypso*, but easily distinguished by its bright luteous upper wings and the beautiful pearly whiteness of the under surface of the posterior.

VI.—*Notes on Birds*. By T. C. EYTON, Esq., F.L.S.

No. V.

[With a Plate.]

[Continued from vol. viii. p. 47.]

Aramus scolopaceus, Bon. (male).

THE œsophagus at its upper extremity is when inflated half an inch in diameter, but is dilated near its middle into an oval crop fully two inches in diameter and three in length; there is also another slight enlargement immediately above the proventriculus: the total length of the œsophagus from the epiglottis to the proventriculus is thirteen inches. The proventriculus is one inch in diameter and nearly two in length when inflated; its upper portion is fleshy and thickened, but the coats become thinner as it becomes more expanded; it is contracted immediately above the stomach. The stomach is moderately muscular and slightly oval. The epithelium is hardened and rugose towards its lower portion. The greatest length of the gizzard is two inches, and its greatest diameter is one and a half inch. The small intestine is a quarter of an inch in diameter, and uniform from the gizzard to the rectum, and two feet three inches in length. The cæca are of moderate size, and consist of sacs three-quarters of an inch in diameter for two-thirds of their length and contracted to a quarter of an inch before their entrance into the rectum; they are slightly larger near the middle than at their upper extremity. The right cæcum measures three inches in length, the left two and a half inches. The rectum is seven and a half inches in length, and very slightly larger than the small intestine. The cloaca is of moderate size, measuring half an inch in diameter, and with the coats not much thickened.

The trachea is of small diameter for the size of the bird, and largest at its upper and lower extremities; at the distance of three inches above the bronchiæ, it is convoluted towards the right side on itself, the form of which will be best explained by the Plate. The bony rings become much stronger and more massive above the bronchiæ, and have a larger interval of membrane between them; they

are also laterally compressed. The bronchiæ are almost entirely membranous, having only seven or eight weak and narrow rudimentary rings externally.

The gizzard and œsophagus were filled with a species of zoophyte apparently allied to the common sea anemone. The tongue is long and taper, channeled in the middle and horny; from the epiglottis to its tip it measures five and a half inches.

The sternum of *Aramus* is long in proportion to its breadth, measuring three and a half inches in length, and at its broadest part, which is near its posterior extremity, one inch in breadth; its narrowest point is at the junction of the posterior ribs, where it is eight-tenths of an inch in breadth, from which point it gradually increases in breadth posteriorly and anteriorly. The posterior margin is entire, without any fissure or foramen, but has a slight undulation in the centre opposite to the point of the keel. The keel is eight-tenths in depth at its widest point, which is about one-third of its length from the anterior extremity; its inferior edge is much rounded and the anterior much scolloped.

The os furcatum, coracoids and scapulars are strong and massive; the former arched anteriorly, each branch flattened laterally at its junction with the coracoids, and in the opposite direction at its junction with the sternum, so as to have the appearance of being twisted on its axis; the point at which the branches unite is destitute of any process.

The coracoids are one inch and seven-tenths in length, and jointly occupy the whole breadth of the sternum, being much expanded at their junction with it; their interior edges are furnished with a thin process beginning at their junction with the scapulæ, where it is slightly deflected and continued for about two-thirds of their length, gradually narrowing to that point where it is eventually lost.

The scapulæ are two and a half inches in length, and of uniform breadth to within a short distance of their extremities, where they become pointed, the upper edge becoming deflexed.

The pelvis is two inches and seven-tenths in length from its anterior extremity to the junction of the caudal vertebræ. The upper surface on viewing it laterally presents a waved outline, being depressed near its centre, and somewhat raised between that point and its anterior extremity by means of the anterior branch of the ilium being much expanded. The breadth of the pelvis at its junction with the dorsal vertebræ is one inch; immediately posterior to the articulation of the femur, which is its widest point, the breadth is one inch and a half; between these points the iliac bones are slightly narrowed laterally, so as to present a nearly uniform curve between them. The ischium is placed nearly perpendicularly, the edge of the ilium projecting over it and forming a prominent ridge along the edge of the plane of the upper surface of the pelvis; the ischiadic foramen is of moderate size and oval, its greatest diameter being four-tenths of an inch, and its smallest little more than two-tenths; the obturator foramen is small, or about half the size of the ischiadic one. The os pubis is rather broad, not prolonged far backwards behind the

ischium, and united only to that bone at the upper extremity, so as to form a deep and unbroken fissure between it and the ischium from the obturator foramen along its whole length. The whole length of the cranium from the tip of the bill to the occiput is six inches and eight-tenths; its greatest breadth, which is immediately behind the eyes, is one inch and one-tenth; the frontal bones are elongated over the orbits of the eyes, and measure immediately above them half an inch in breadth; a larger portion of ethmoidal bone than is usual in the order *Grallatores* is apparent on the forehead. The lacrymal bones project laterally and posteriorly in the same plane with the nasal bones, forming two processes projecting backwards towards the orbits of the eyes. The septum between the orbits of the eyes is not complete, but has a large irregularly-formed foramen through it posteriorly.

The inferior maxillary bones are slightly curved downwards, flattened, broadest at their base and gradually tapering to their tips; the rami are ankylosed together for nearly one-third of their length towards the tip; the base of each ramus is perforated by a large oval foramen half an inch in length and two-tenths in breadth.

The femur is three inches in length and slightly curved in a downward direction. The trochanter is of moderate size and edged.

The tibia is six inches and three-quarters in length. The fibula extends down two-thirds of the length of the tibia; the internal crest is large, flattened laterally and rounded anteriorly; the tarsi measure four inches and eight-tenths in length, and are rather robust for the size of the bird.

The wing-bones are short and weak; the length of the humerus is four inches, that of the ulnar bones four inches and seven-tenths of an inch, and that of the metacarpus two inches.

The formula of the vertebræ is—

Cervical 16; Dorsal 7; Sacral 13; Caudal 7.

The ribs are nine in number, with one false one anteriorly and one posteriorly; they are light and weak, and all, with the exception of the false ones and the last posterior true one, furnished with long narrow osseous splints directed rather acutely upwards.

REMARKS.—In the anatomy of the intestines and œsophagus this bird approaches closely to the *Rallidæ*. The stomach however is not furnished with such powerful muscles, which would not be required in a bird which, judging from the contents of the present subject's stomach and œsophagus, feeds entirely on soft animals. I am not aware of any bird that has a similar convolution of the trachea to that represented in the Plate among *Grallatores*, or indeed in any other order; convolutions occur in the trachea of *Athropoides Stanleyanus*, Vig., *Ardea Virgo*, Linn., and in the Common Spoonbill, all of which have been figured by Mr. Yarrell in the 'Linnæan Transactions'; in the two former however the trachea enters the sternum, and in the latter the convolution takes place in the interior of the thorax, and is of a dif-

ferent character to that found in *Aramus scolopaceus*. In the form however of the inferior larynx and the trachea, a short distance above it, a resemblance is found to the trachea of *Tantalus*, described by Mr. Brookes in the 'Linnæan Transactions,' those parts being laterally compressed. The Courlan (*Aramus scolopaceus*) is described by Nuttall in his 'American Ornithology' "as being heard by night as well as by day, crying out in a sonorous voice *carau!*" He also states, "that it is well-entitled to the name of the supposed crying-bird of Bartram." In some parts also it is called the clicking hen, under which designation I have received it from Honduras, all which names however denote that it has a peculiar power of voice which the conformation of the trachea fully bears out.

Among the series of skeletons of Grallatorial birds in my possession*, there is not one that approaches to that of *Aramus* in the form of the sternum, the whole of them having either two or four deep fissures in the posterior margin of that bone. I have never seen the skeleton of *Tantalus*, but suspect that *Aramus* approaches very nearly to that genus.

The sternum of *Aramus* is much longer also than that of any of the Grallatorial genera named in the note.

In the structure of the pelvis, legs and ribs, *Aramus* agrees with *Porphyrio* and *Rallus*, but the coracoids, os furcatum, scapulæ and wings are much stronger considering the respective sizes of the birds. The os furcatum also differs in form.

Most Grallatorial birds have the septum between the orbits of the eyes more or less perforated; I cannot therefore derive any information from this character, and I have no grallatorial skeleton in my possession which has the lacrymal bones of the same form.

EXPLANATION OF PLATE III.

Aramus scolopaceus, male.

Fig. 1. Lower portion of the trachea, nat. size.

Fig. 2. Esophagus and stomach half the natural size.

Fig. 3. A portion of the intestine and left cæcum.

Fig. 4. Posterior portion of the sternum, nat. size.

* I have in my collection the skeletons of species of the following genera: *Tinocorus*, *Porphyrio*, *Ardea*, *Egretta*, *Rallus*, *Botaurus*, *Nycticorax*, *Charadrius*, *Tringa*, *Totanus*, *Scolopax*, *Streptopus*, *Vanellus*, *Squatarola*, *Limosa*, *Machetes*, *Gallinula*, *Rhynchoea*, *Crex*, *Numenius*, *Hoplopterus*, *Hæmatopus*, *Himantopus*, *Ibis*, *Fulica*, *Phænicopterus*, *Edicnemus*, *Ciconia*.

J. Basire lith.