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PAPER – didactic supplement

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WOODPIGEON’s ANATOMY – Photographic Atlas

Cavina Enrico m.d. – surgeon – Club Italiano del Colombaccio

https://plus.google.com/photos/103942035281038458760/albums/5802521945641185121

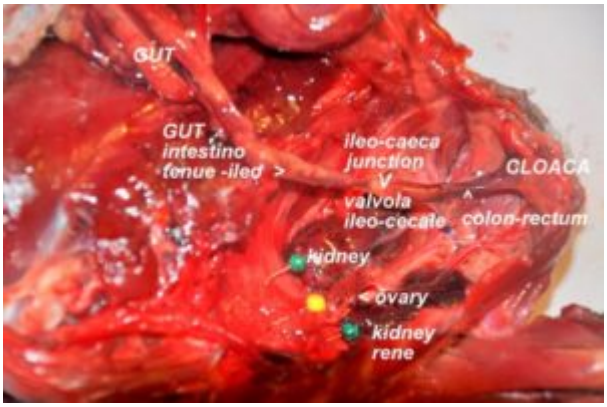
Introduction

The aim of the present Atlas is only to show – quite live-real – the organs , anatomic structures ,teguments,muscles’apparatus ,anatomic details presented by a right surgical dissection . Studying the anatomy by other ancient and modern Texts and schematic designs , the reader can have here right approach by the “live” Anatomy .

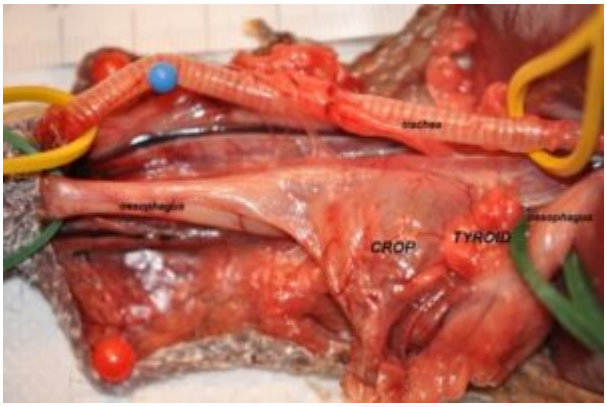
Materials and method

The material is simply the body of an adult “wild” Woodpigeon and other .

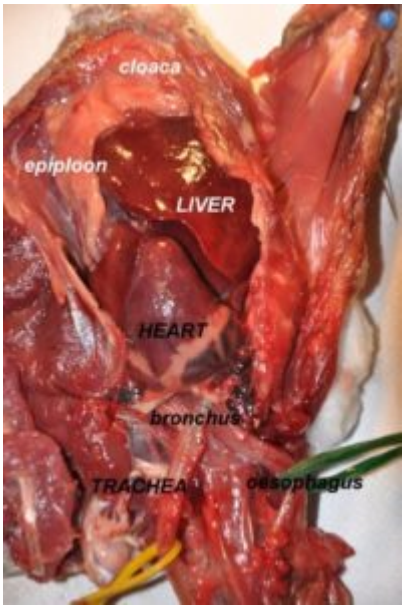
The surgical dissection has been performed on a fresh body .

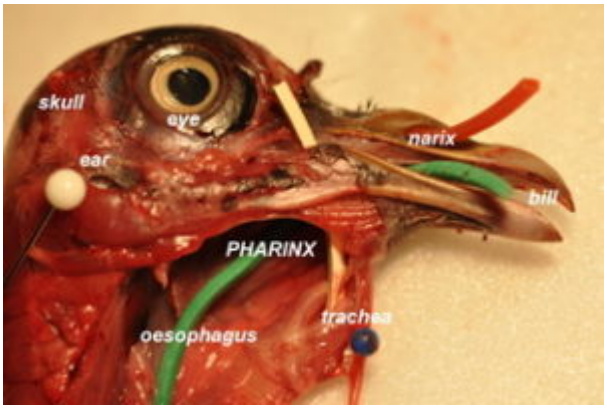


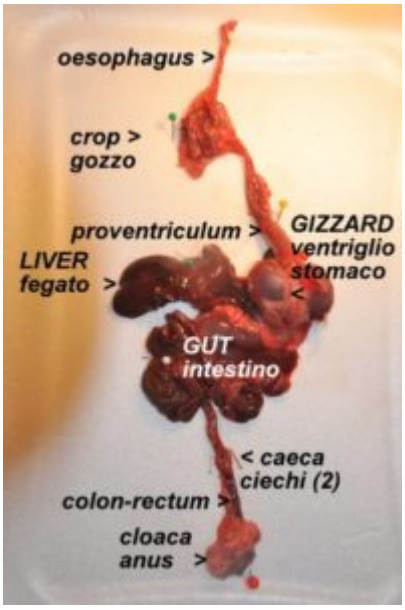












To explore the body's external internal images , the reader needs to connect with didactic Links easily available on the Web by Google as listed below .

The key-words will be : birds' anatomy , pigeon's anatomy, wildpigeons'anatomy .

For better understanding of the images and full-anatomy we suggest to start by

https://www.youtube.com/watch?v=QnOiUonB1N4&sns=em

https://www.youtube.com/watch?v=JVekq_Ag1yA

https://www.youtube.com/watch?v=aFdvkopOmw0

https://www.youtube.com/watch?v=TGiIlwnaNmM

https://www.youtube.com/watch?v=kWMmyVu1ueY

and attached nuomerous Youtube Links

RESULTS

Photographic atlases have the advantage….images of the actual structures themselves .

Some significative anatomic pictures by our personal surgical dissection are as following

The full (128 images) approach to the Atlas of Anatomy of Woodpigeon is at :

https://plus.google.com/photos/103942035281038458760/albums/5802521945641185121

128 images

Special focus on PTO

https://plus.google.com/photos/103942035281038458760/album/5819115742956206561?authkey=CPvroqCRw9XBWw

All the Anatomic images by

https://plus.google.com/photos/103942035281038458760/albums/5802521945641185121

Particularly interesting could be the study by **Comparative Anatomy** as for example by (Crow) at this Cavina/Links of the Author

https://plus.google.com/photos/103942035281038458760/album/6132005334176821249/6132007549265377602 (Crow)

https://plus.google.com/photos/103942035281038458760/album/5677109778905558449 (Woodcock – Scolopax rusticola)

https://plus.google.com/photos/103942035281038458760/album/5742776865730420689 (idem)

https://plus.google.com/photos/103942035281038458760/albums/59

3424509870262651 3?authkey=CIm7lc7MrpKF9AE (quail)

and by Histology (Woodcock)

https://plus.google.com/photos/103942035281038458760/album/5633103546332622241

CONCLUSION

The message is unique as by commemorative medal of Giovanni Vitali the Italian Scientist discoverer of PTO " NO SCIENCE WITHOUT ANATOMY "



WEB LINKS

https://sciencing.com/reproductive-system-pigeon-8564838.html

https://babel.hathitrust.org/cgi/pt?id=coo.31924000932164;view=1up;seq=18

http://avianmedicine.net/content/uploads/2013/03/44.pdf

http://aviators-loft.skyrock.com/3248141304-Breast-Muscles-of-the-Racing-Pigeon-Sprint-vs-Distance-Birds.html

http://www.jecajournal.org/article.asp?issn=1596-2393;year=2016;volume=15;issue=1;spage=27;epage=30;aulast=Udoumoh

http://www.jneurosci.org/content/jneuro/22/4/RC210.full.pdf

http://pij-n-angels.forumotion.net/t571-pigeon-anatomy

https://biosphera.org/international/product/3d-bird-anatomy-software/

http://internal.champaignschools.org/staffwebsites/isabelgi/Zoology/Pigeon{a6be835d09a84c463fa955f66368ad74671de57ffb293aa26834595a88d1abe5}20Dissection.pdf

http://www.wellcomeimageawards.org/2017/pigeon-thermoregulation

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REVIEW

Consistent response of bird populations to climate change on two continents

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Science 01 Apr 2016:

Vol. 352, Issue 6281, pp. 84-87

Philip A. Stephens1, and 32 co-Authors as by http://science.sciencemag.org/content/352/6281/84

The climate changes we are experiencing, how, how-much , where do they affect the environmental biodiversity and the life of the various species of birds? Do they bring damages or benefits?

These questions are addressed by a complex, extremely complex, all-continental research, as published recently on the prestigious magazine SCIENCE in 2016, using the integrated work of 33 researchers from Europe and North America.

The Work, as we have already said, is very complex and is articulated on complex statistical evaluations, projected also to the forecasting and use of “indices” or indicators and formulas, in fact forecasting formulas that are not easily understood by non-professionals.

http://science.sciencemag.org/content/352/6281/84

The “focus” of the Work is: <Avian Species respond differently to climate change in the two continents? >. The answer is basically “no”: in the two continents the various species of Birds respond negatively (mostly) and positively (less species of birds) in a fundamentally uniform manner in the two continents that for their spatial location (latitudes, longitudes, geomagnetism etc.) are subject to various conditions of climate change, mostly related to terrestrial overheating.

Some interesting elements emerge for the species Columba palumbus, the Colombaccio of the Western Palearctic.

Without entering into the complex aims of the Work, however, voted to identify “test-index ” linked to the biological responses of the Birds in the two Continents, we can extract and extract some data concerning the Woodpigeon .

The populations of over 150 species of birds have had various responses of decrease and increase. The Palaearctic Species Columba palumbus did not suffer from climate change but rather benefited, as seen from surveys for 13 out of 20 countries of the Western Palaearctic. In various Tables of documentation for all the Species one can read a specific “trend index” specific for the Woodpigeon , which in the 20 countries spreads from a negative minimum of “- 0.004” in Holland to a

positive maximum “+ 0.121 ” in Italy . This positive status in Italy also corresponds to another datum: climate change has had negative effects for 94 avian species in Italy, and instead implies positive effects for 10 species in Italy, among which Columba palumbus.

The analysis of the “Science” article did not take into consideration many Eastern European countries that represent territories of origin for our woodpigeons , and this seems to represent a limitation of the Work, especially for Migratory Birds. However the intensity of the Woodpigeons’ Migration in Italy in the last year 2017 could also be considered as an added value to the positive “index” detected by “Science”

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Drafts of papers "work in progress"

– Lavoro in ITALIANO

METEO e MIGRAZIONE degli UCCELLI : corridoi altimetrici isobarici , Colombaccio (*Columba palumbus*),eventi ed analisi interpretative .

Roberto SCHIAROLI (*) – CAVINA Enrico (2) ……. ……. …….

(1)

(2) Club Italiano del Colombaccio

Parole chiave : *Meteorologia (Meteo),Pressione Atmosferica (P.A.), isobare , corridoi altimetrici ,involi ,migrazione,organo paratimpanico (PTO)*

La migrazione autunnale del Colombaccio (*Columba palumbus*) in Italia ed in Europa si svolge in prevalenza in Ottobre . La fenomenologia della Migrazione è complessa ed è stata altrimenti trattata da Esperti del Club Italiano del Colombaccio (1997-2018) come da indicazioni in Bibliografia .

Tra i campi di Ricerca insiti nello studio delle Migrazioni è intuitivo il riferimento alle condizioni del tempo e tutti i relativi connessi fattori abiotici , tra i quali oggetto

tuttora di studio è la correlazione con le funzioni supposte del c.d. “ *barometro / altimetro biologico* “ quale identificato nel 1911 come Organo Paratimpanico (PTO) di Vitali , Ricercatore e Professore dell’Università di Pisa , che per questa scoperta fu selezionato candidato al Nobel negli anni ’30.

Circa la Migrazione del Colombaccio ,numerosi studi analitici – protratti per oltre 20 anni – hanno evidenziato il realizzarsi di “onde migratorie” modicamente variabili per datazione in Autunno , spesso o quasi sempre caratterizzate anche da “ PICCHI” migratori concentrati, unici od anche ripetitivi in ogni stagione in Italia ed in Europa ,fortemente condizionati dal Meteo .

L’analisi retroattiva dei “Picchi” mette in evidenza una problematica rilevante in termini di Ricerca scientifica sulle Migrazioni :

< perché –come nel caso del Colombaccio – così tanti (migliaia ed intere popolazioni di individui) decidono di partire tutti insieme dalle sedi di origine o di stop-over , con involi di massa quali si verificano lungo le rotte principali a varie longitudini e latitudini ? >.

Il quesito si pone prepotentemente all’interno di analisi meteorologiche contingenti.

Gli stimoli alla base di tale “ *decision making* “ migratorio sono vari e si esplicano in quel complesso sistema sensitivo che comprende lo status biologico dell’ucllo (fotoperiodo sec. Latitudine-longitudine , in primis) e tutta la c.d. “ ecologia sensitiva” . Tutti gli stimoli vanno a coordinare la migrazione autunnale – fortemente condizionata dallo status climatologico e meteorologico dell’anno – con alcuni ben definiti scopi :

1. svolgere il volo migratorio in sicurezza e con quanto possibile ridotto consumo delle riserve energetiche ;

2. raggiungere i predestinati luoghi di svernamento nei tempi giusti ed in condizioni corporee e “sociali” idonee allo svernamento stesso ;
3. rispondere pienamente allo stimolo genetico di “salvaguardia della Specie “.

Nello specifico dei “Picchi” migratori tutti i sensi sono coinvolti (ecologia sensitiva) per programmare e decidere il momento dell’involo , e quando tutto è pronto deve esserci un momento nel quale “ *un dito virtuale preme il pulsante “ .*

L’implicazione propriamente meteorologica sembra essere prepotentemente decisiva .

Alcuni studi retroattivi e ricerche anatomo-fisiologiche pertinenti indicano ormai con quasi certezza che il *barometro biologico (PTO)* è il pulsante sul quale agisce un fattore fisico (*il dito che preme*) identificabile in uno sbalzo della Pressione Atmosferica (più o meno repentino o diluito 12-24-48 ore) superiore a 10 hPa nel contesto di una situazione meteorologica che tende a stabilizzare l’atmosfera per una vasta area di Alta Pressione .

Emblematico lo sbalzo di 27 hPa nelle 12 ore precedenti l’involo e transito di mezzo milione di Colombacci , oltre a 90.000 oche e 14.000 gru , verificatosi 11 Ottobre 2013 in Svezia .

Molti altri dati similmente documentativi sono stati pubblicati in questi ultimi anni .

Se rilevante è l’elemento “ sbalzo della P.A. “ , altrettanto deve essere la verosimile condizione meteo-atmosferica che segue tale sbalzo e che sembra confermare per più ore/giorni la giustezza della decisione d’involo , dato che le condizioni di Alta Pressione – specie se realizzano un corridoio tra due aree di Bassa Pressione (vedi schematizzazione di Alerstam) – garantiscono condizioni di stabilità atmosferica in assenza di turbolenze , tutte condizioni che garantiscono risparmio di

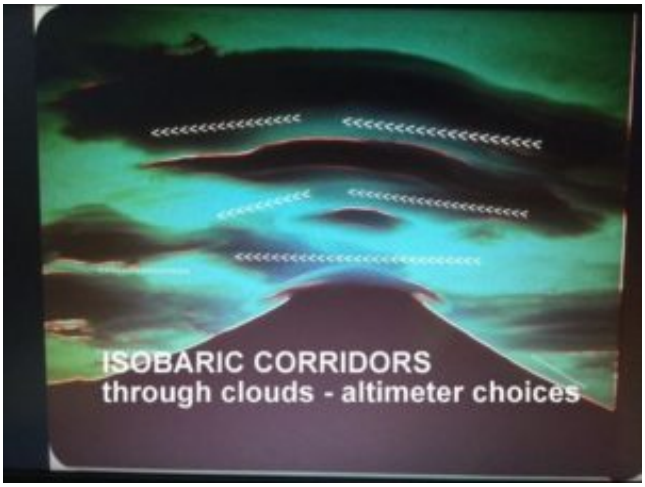
energie pur in lungo o lunghissimo volo “battente” migratorio .Se le condizioni di vasto corridoio di Alte Pressioni in mezzo ad aree cicloniche , si protraggono per molti giorni e su interi segmenti di Continente (vedi figura ….) , allora può anche verificarsi una massiccia e continuativa migrazione continentale come si è verificato nell’Ottobre 2017 .

Focalizzando l’analisi su “Picchi” migratori –quasi sempre molto localizzati per aree d’involo e transito – dobbiamo possibilmente indagare sia l’estensione di superficie dei corridoi aerei sia l’estensione altimetrica dei medesimi che di fatto costituiscono delle vie virtuali utili allo svolgimento aerodinamico del volo . Tali condizioni sulla nostra Penisola risentono fortemente dell’orografia in particolare trans-Appenninica .Bisogna inoltre ricordare che altri fattori abiotici incidono in qualche misura – oltre alla significatività di prevalenza statistica (vedi P.A.) – nella fisiologia degli “echi sensoriali” : temperatura,umidità,soleggiamento,visibilità,venti,nuvolosità e precipitazioni , nonché durata della luce del giorno,fasi lunari ,disturbi da antropizzazione del territorio , variazioni dell’elettromagnetismo terrestre .

Molti di questi fattori sono stati considerati in dettaglio statistico crudo in precedente Lavoro “ Decision making of autumn migrations of Woodpigeons (*Columba palumbus*) in Europe : analysis of the abiotic factors and “focus” on Atmospheric Pressure changes “ (CavinaE.,2014,on-line http://www.scienceheresy.com/ornithologyheresy/Cavina2015.pdf).

L’argomento “ corridoi altimetrici” di percorrenza – dopo involi di massa – si presta a più dettagliata indagine ed analisi , coinvolgente la Meteorologia.





WORK in PROGRESS : suggestions welcome