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OSTEOLOGIA AVIUM;

OR,

A SKETCH OF THE OSTEOLOGY
OF BIRDS.

BY

Thomas Campbell
T. C. EYTON, ESQ., F.G.S., F.L.S.,

And Corresponding Member of Institute of Philadelphia.

==
PLATES.
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TO BE HAD OF MR. PRINCE, AT MR. J. GOULD'S, CHARLOTTE STREET,
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PUBLISHED BY R. HOBSON, WELLINGTON, SALOP.

1867.



1840 - 1850

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OSTEOLOGIA AVIUM.

LIST OF PLATES.

No. of Plate.

Introduction

Int. 1. Pandion leucocephalus

2. Struthio camelus

Fig. 1. *Upper part of cranium*

— 2. *Lower maxillary bone*

— 3. *Basal view of cranium*

Int. 3. Fig. 1. Struthio camelus. *Side view of cranium*

2. ————— *Side view of lower maxillary bone*

3. Numida cristata. *Sternum of the young of*

4. Turdus musicus. *Pelvis of the young of*

5. ————— *Sternum of ditto*

Int. 4. Fig. 1. Casuarius emeu. *Basal view of the cranium*

2. Podargus humeralis, *ditto*

3. Falco peregrinus, *ditto*

SKELETONS.

1 A. Sarcoramphus gryphus

2 A. Serpentarius reptilivorus

3 A. Falco peregrinus

4 A. Ketupa javanensis

1 A. bis. fig. 1. *Skeleton of Trochilus gigas*

2. *Palatine bones of ditto*

3. *Pelvis*

4. *Metatarsi*

5. *Details of Petasphora jolata*

2 A. bis. *Skeleton of Cypselus apus, and details*

1 B. Podargus humeralis

2 B. Coracias indica

3 B. Eurystomus orientalis

4 B. Trogon melanocephalus

5 B. fig. 1. Todus viridis

2. Alcedo ispida

No. of Plate.

6 B. Buceros Abyssinicus

7 B. Capito Swainsonii

8 B. Eurylamius sumatranus

1 C. Chrysotis Braziliensis

1 D. Gecinys dimideatus

1 E. Centropus phasianus

2 E. Turacus gigas

3 E. Pteroglossus Baillonii

4 E. Cuculus glandarius

5 E. Geococcyx Mexicanus

1 F. Xiphorhynchus trochilirostris

2 F. Anthochaera Lewinii

3 F. Menura Lyra

5 F. fig. 1. Sylvia Hippolais

2. Parula Braziliana

6 F. fig. 1. Tehitrea Melanopyga

2. Tytyra inquisitor

7 F. Turdus choki

8 F. fig. 1. Platyrhynchus cancromus

2. Hirundo riparia

9 F. Neomorpha Gouldii

10 F. Cassicus bifasciatus

11 F. fig. 1. Drymophila loricata

2. Lanius collurio

12 F. fig. 1. Saltator magnus

2. Spermophaga hæmatina

13 F. Cypsirhina leucoptera

1 G. Goura coronata

1 H. Tetrao urogallus

2 H. Crax globocera

3 H. Phasianus Nycthemerus

4 H. Oreophasis Derbrianus

1 I. Struthio camelus

1 J. Otis houbara

1 K. Leptophilus argala

2 K. Scops virgo

3 K. Cariama cristata

4 K. Phœnicopterus ruber

No. of Plate.

- 5 K. *Psophia viridis*
- 6 K. *Threskiornis melanocephala*
- 7 K. *Harpiprion Hagebach*
- 8 K. *Totanus glottis*
- 9 K. *Scolopax rusticola*
- 10 K. *Limosa rufa*
- 11 K. *Hæmatopus capensis*
- 12 K. *Helias phalænoides*
- 13 K. *Glareola pratincola*
- 14 K. *Aramus scolopaceus*
- 15 K. *Œdicnemus longirostris*
- 1 L. *Colymbus septentrionalis*
- 2 L. *Podiceps cristatus*
- 3 L. *Uria troile*
- 4 L. *Eudyptes*
- 5 L. *Graculus cristatus*
- 6 L. *Sula bassana*
- 7 L. *Onocrotalus*
- 8 L. *Procellaria gigantea*
- 9 L. *Diomedea exulans*
- 10 L. *Thalassidroma pelagica*
- 11 L. *Chroicocephalus ridibundus*
- 12 L. *Rhynchops nigra*

DETAILS.

- Pl. 1, fig. 1. *Sternum of* *Aquila chrysaetus*
2. ————— *Cathartes aura*
 3. ————— *Neophron percnopterus*
 4. ————— *Sarcoramphus gryphus*
 5. ————— *Gyps fulvus*
 6. ————— *Vultur cinereus*
 7. ————— *Serpentarius reptilivorus*
 8. ————— *Cathartes niger*
 9. ————— *Polyborus tharus*
 10. ————— *Gypaetos barbatus*
- Pl. 2, fig. 1. *Metatarsi of* *Pandion leucocephalus*
2. ————— *Aquila cinereus*
 3. ————— *Falco peregrinus*
 4. ————— *Circus cyaneus*

No. of Plate.

- Pl. 2, fig. 5. *Metatarsi of* *Spizaetos cristatus*
6. ————— *Sarcoramphus papa*
 7. ————— *Nyctea nivea*
 8. ————— *Noctua Tengmalmi*
 9. ————— *Serpentarius reptilivorus*
 10. ————— *Strix delectatulus*
- Pl. 3, fig. 1. *Sternum of* *Falco gyrfalco*
2. ————— *Pandion leucocephalus*
 3. ————— *Iracidea berigora*
 4. ————— *Circus cyaneus*
 5. ————— *Ibycter ater*
 6. ————— *Accipiter nisus*
 7. ————— *Milvus migrans*
 8. ————— *Cymindis unicinctus*
 9. ————— *Hierax Bengalensis*
 10. ————— *Pandion haliaetus*
 11. ————— *Circaetus Brachydactylus*
 12. ————— *Spizaetos cirrhatus*
 13. ————— *Heliastur Ponticerianus*
 14. ————— *Aquila nævia*
- Pl. 4, fig. 1. ————— *Strix delicatulus*
2. ————— *Nyctea nivea*
 3. ————— *Ketupa javanensis*
 4. ————— *Ephialtes grammicus*
 5. ————— *Strix praticola*
 6. ————— *Nyctale Tengmalmi*
 7. ————— *Asio brachyotus*
 8. ————— *Noctua (from Jamaica)*
 9. ————— *Bubo Bengalensis*
 10. ————— *Strix flammea*
- Pl. 5, fig. 1. *Pelvis of* *Sarcoramphus gryphus*
2. ————— *Aquila cinereus*
 3. ————— *Nyctea nivea*
 4. ————— *Falco peregrinus*
 5. ————— *Pandion haliaetus*

No. of Plate.

- Pl. 6, fig. 1. *Palatine bones* of *Sarcoramphus gryphus*
2. Ditto *Serpentarius reptilivorus*
 3. Ditto *Neophron percnopterus*
 4. Ditto *Polyborus tharus*
 5. Ditto *Falco peregrinus*
 6. Ditto *Aquila chrysaetos*
 7. Ditto *Circaetus brachydactylus*
 8. Ditto *Spizaetos cristatus*
 9. Ditto *Hiracidea Berigora*
 10. Ditto *Nyctea nivea*
 11. Ditto *Strix delicatulus*
 12. Ditto *Asio brachyotus*
- Pl. 7, fig. 1. *Coracoid, sternum, and furculum* of *Sarcoramphus gryphus*
2. Ditto *Falco peregrinus*
 3. *Nyctea nivea*
- Pl. 8, fig. 1. *Sternum* of *Podargus humeralis*
2. ————— *Harpactes Reinwartii*
 3. ————— *Megalaima corvina*
 4. ————— *Chelonidera tenebrosa*
 5. ————— *Eurylaimus sumatranus*
 6. ————— *Eurystomus orientalis*
 7. ————— *Alcedo ispida*
 8. ————— *Merops bicolor*
 9. ————— *Todus viridis*
 10. ————— *Coracias garrula*
 11. ————— *Upupa epops*
 12. *Buceros Abyssinicus*
- Pl. 9, fig. 1. *Pelvis, coracoids, furculum, and metatarsi* of *Podargus humeralis*
2. Ditto *Dacelo Leachii*
 3. Ditto *Pezoporus formosus*
- Pl. 10, fig. 1. *Sternum, coracoids, furculum, pelvis, and metatarsi* of *Psittacus erythacus*
2. Ditto *Calyptorhynchus Bau-dinii*
 3. Ditto *Pezoporus formosus*

No. of Plate.

- Pl. 11, fig. 1. *Base of cranium and section of* *Psittacus erythacus*
2. *Metatarsi, furculum, coracoid, pelvis, palatine bones, and sternum* of *Gecinus viridis*
- Pl. 12, fig. 1. *Palatine bones* of *Podargus humeralis*
2. Ditto *Harpactes Reinwartii*
 3. Ditto *Megalaima virens*
 4. Ditto *Chelonidera tenebrosa*
 5. Ditto *Eurylaimus sumatranus*
 6. Ditto *Dacelo gigantea*
 7. Ditto *Merops bicolor*
 8. Ditto *Todus viridis*
 9. Ditto *Coracias garrula*
 10. Ditto *Upupa epops*
 11. Ditto *Buceros Panini*
 12. Ditto *Momotus Braziliensis*
- Pl. 13, fig. 1. *Palatine bones, sternum, metatarsi, and pelvis* of *Centropus phasianus*
2. Ditto *Turacus gigas*
 3. Ditto *Pteroglossus Baillonii*
- Pl. 14, fig. 1. *Pelvis, sternum, metatarsi, and palatine bones* of *Menura superba*
2. *Pteroptochos albicollis*
- Pl. 15, fig. 1. *Palatine bones, pelvis, sternum, and metatarsi* of *Tropidodorhynchus argenticeps*
2. Ditto *Troglodytes furva*
 3. Ditto ————— *vulgaris*
 4. Ditto *Hirundo riparia*
 5. Ditto *Nectarina javanica*
- Pl. 16, fig. 1. *Sternum, upper surface of cranium, pelvis, and metatarsi* of *Tytyra inquisitor*
2. Ditto *Petricola aurantia*
 3. Ditto *Tchitreia melanopyga*
- Pl. 17, fig. 1. *Palatine bones, sternum, pelvis, and metatarsi* of *Alanda alpestris*

No. of Plate.

- Pl. 17, fig. 2. *Palatine bones, sternum, pelvis, and metatarsi of Parus cæruleus*
 3. Ditto *Malurus cyaneus*
 4. Ditto *Philomela vulgaris*
- Pl. 17, bis, fig. 1. *Palatine bones, sternum, pelvis, and metatarsi of Cassicus bifasciatus*
 2. Ditto *Neomorpha Gouldii*
- Pl. 18, fig. 1. *Palatine bones, sternum, and pelvis of Scolephagus major*
 2. Ditto *Cyclarius guanensis*
 3. Ditto *Cephalopterus penduliger*
- Pl. 19, fig. 1. *Palatine bones, sternum, pelvis, and metatarsi of Saltator magnus*
 2. Ditto *Cypsiirhina leucopterus*
 3. Ditto *Fregilus graculus*
- Pl. 20, fig. 1. *Sternum, pelvis, palatine bones, and metatarsi of Goura coronata*
 2. Ditto *Columba magnifica*
- Pl. 21, fig. 1. Ditto *Phalacroteron nudirostris*
 2. Ditto *Ptilinopus cinctus*
 3. Ditto *Altagis Gayii*
- Pl. 22, fig. 1. Ditto *Lophortyx Californicus*
 2. Ditto *Crax globicera*
- Pl. 23. *Sternum, pelvis, and metatarsi of Struthio camelus*
- Pl. 24. *Pelvis, sternum, metatarsi, and palatine bones of Casuarius emeu*
- Pl. 25. *Lower surface of cranium, upper surface and side rim of pelvis, sternum, and metatarsi of Apteryx Australis*
- Pl. 26, fig. 1. *Palatine bones, sternum, pelvis, and metatarsi of Otis houbara*
 2. Ditto *Tinamus Braziliensis*

No. of Plate.

- Pl. 27, fig. 1. *Palatine bones, sternum, pelvis, and metatarsi of Threskiornis melanocephalus*
 2. Ditto *Psophia viridis*
 3. Ditto *Aramus scolopaceus*
- Pl. 28. Ditto *Oreophasis Derbianus*
- Pl. 29, fig. 1. Ditto *Cariama cristata*
 2. Ditto *Phænicopterus rubra*
- Pl. 29, fig. 1. Ditto *Psophia viridis*
 2. Ditto *Scops balearica*
- Pl. 30, fig. 1. Ditto *Leptophilus argala*
 2. Ditto *Platylea leucorodia*
- Pl. 31, fig. 1. Ditto *Scops virgo*
 2. Ditto *Ciconia alba*
- Pl. 32, fig. 1. Ditto *Tinamus Braziliensis* (figured by mistake, see Pl. 26)
 2. Ditto *Crax mitu*
- Pl. 33, fig. 1. Ditto *Tantalus Ibis*
 2. Ditto *Threskiornis melanocephalus* (nat. size)
- Pl. 34, fig. 1. Ditto *Totanus glottis*
 2. Ditto *Harpiprion Hagebach*
- Pl. 35, fig. 1. Ditto *Scolopax rusticola*
 2. Ditto *Glareola pratincola*
- Pl. 35, bis, 1. Ditto *Limosa rufa*
 2. Ditto *Helias phalænoides*
- Pl. 36, fig. 1. Ditto *Rhyncops nigra*
 2. Ditto *Chroicocephalus ridibundus*
- Pl. 37, fig. 1. Ditto *Diomedea exulans*
 2. Ditto *Procellaria gigantea*
- Pl. 38, fig. 1. Ditto *Eudyptes* ———
 2. Ditto *Onocrotalus NewHolland*
- Pl. 39, fig. 1. Ditto *Thalassidroma pelagica*
 2. Ditto *Uria troile*
- Pl. 40, fig. 1. Ditto *Podiceps cristatus*
 2. Ditto *Colymbus septentrionalis*
- Pl. 41, fig. 1. Ditto *Graculus cristatus*
 2. Ditto *Sula bassana*



From Nature on Zinc by L. Erxleben

Deag & Son, Litho to the Queen.

PANDION LEUCOCEPHALUS.

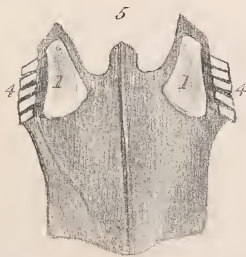
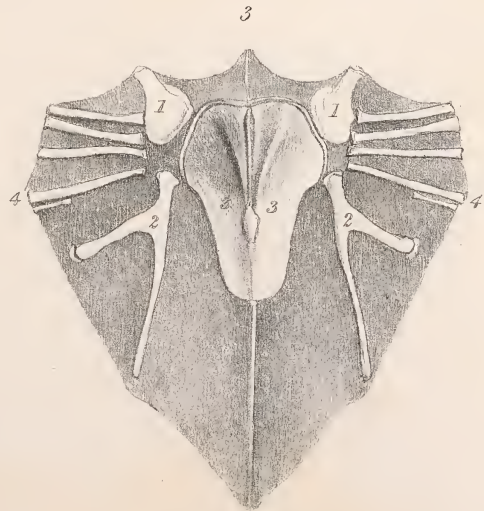
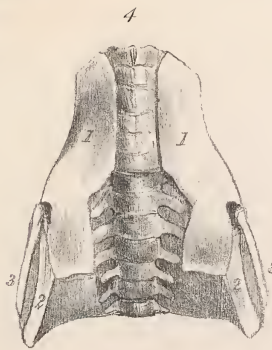


From *Nature on Zinc* by J. Erxleben

STRUTHIO CAMELUS.

Day & Son, Lith^{rs} to the Queen

Fig. 1. Upper part of Cranium.
 „ 2. Lower Maxillary bone.
 „ 3. Basal view of Cranium.



Twice Nat. size.

Twice Nat. size.

Fig. 1. *Struthio Camelus*, side view of Cranium
 " 2. " " side view of Lower Maxillary Bone
 " 3. Sternum of young Guinea Fowl (*Numida Cristata*)
 " 4. *Turdus Mustelus*, Fémur (young)
 " 5. " " Sternum "



1. *Casuarus Emeu.*
 2. *Podiceps Humeralis.*
 3. *Falco Peregrinus.*

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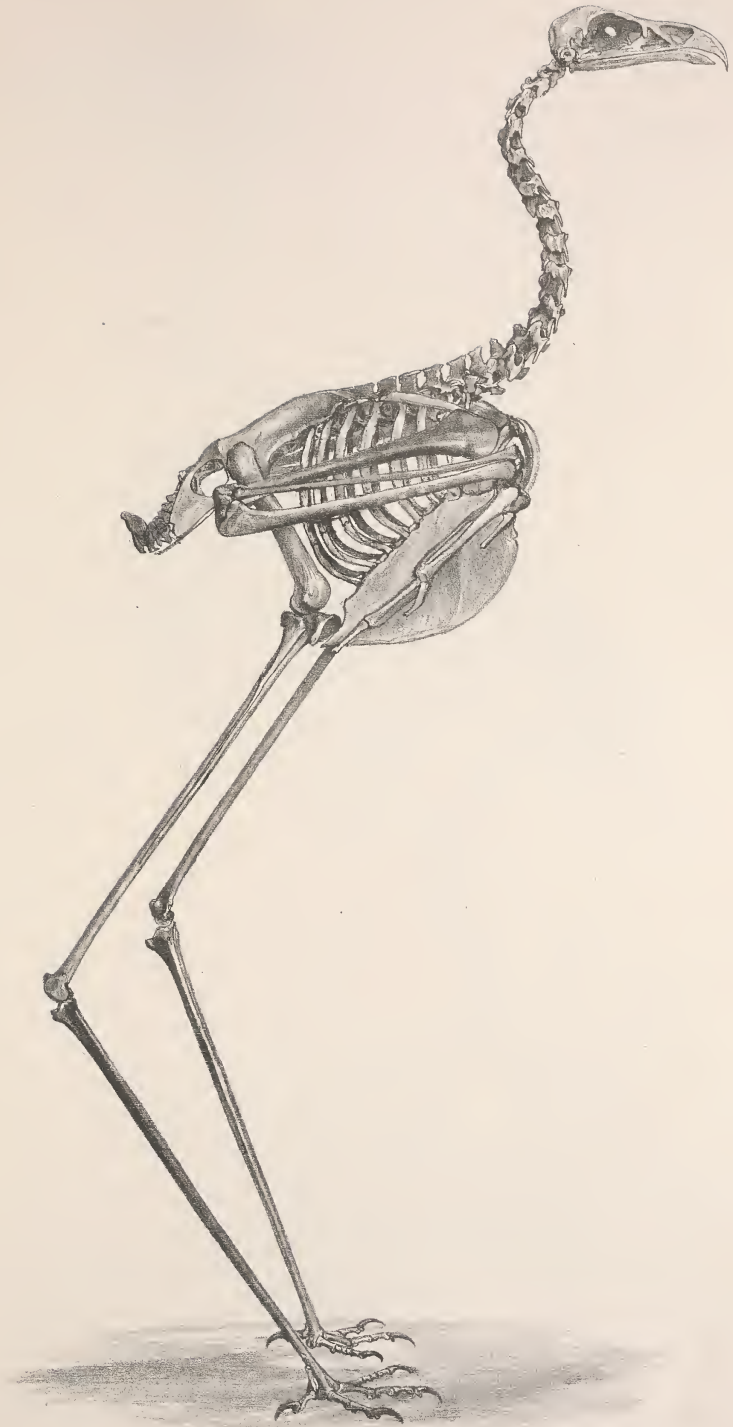
Day & Son, Lith^{rs} to the Queen.



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Day & Son, Litho to the Queen.

SARCORAMPHUS GRYPHUS.



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Day & Son, Lith^{rs} to the Queen.

SERPENTARIUS REPTILIVORUS.



From Nature on Zinc by J. Frauloh.

Day & Son, Lith. to The Queen.

FALCO PEREGRINUS.



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Day & Son, Litho^{rs} to The Queen.

KETUPA JAVANENSIS .



Figs. 1. 2. 3. 4. *Trochilus Gigas*. — Fig. 5. *Petasphora Jolatu*.



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Day & Son, Lith'rs to the Queen.

CYPSELUS APUS.



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Day & Son, Litho/For the Queen

PODARGUS HUMERALIS.



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Day & Son, Litho to the Queen.

CORACIAS INDICA.



EURYSTOMUS ORIENTALIS.



TROGON MELANOCEPHALUS.

1



2

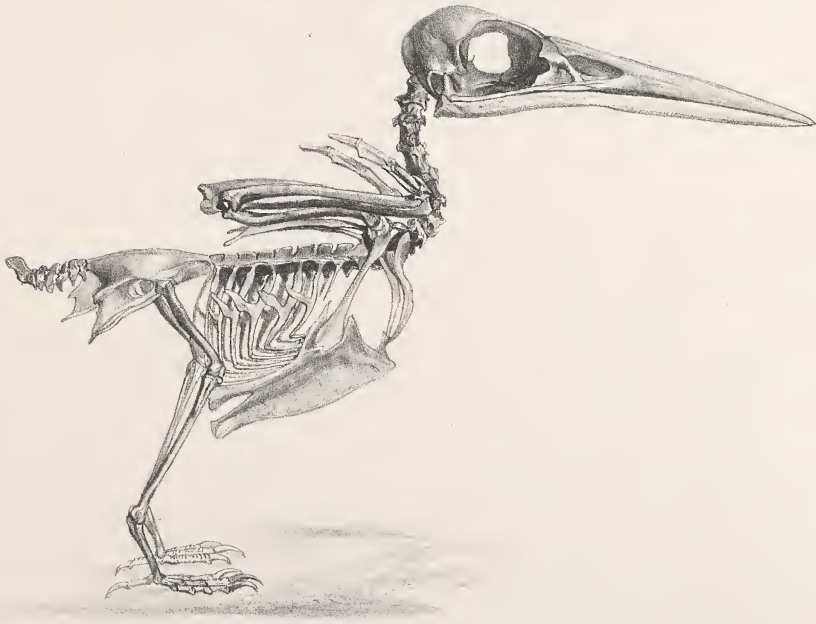
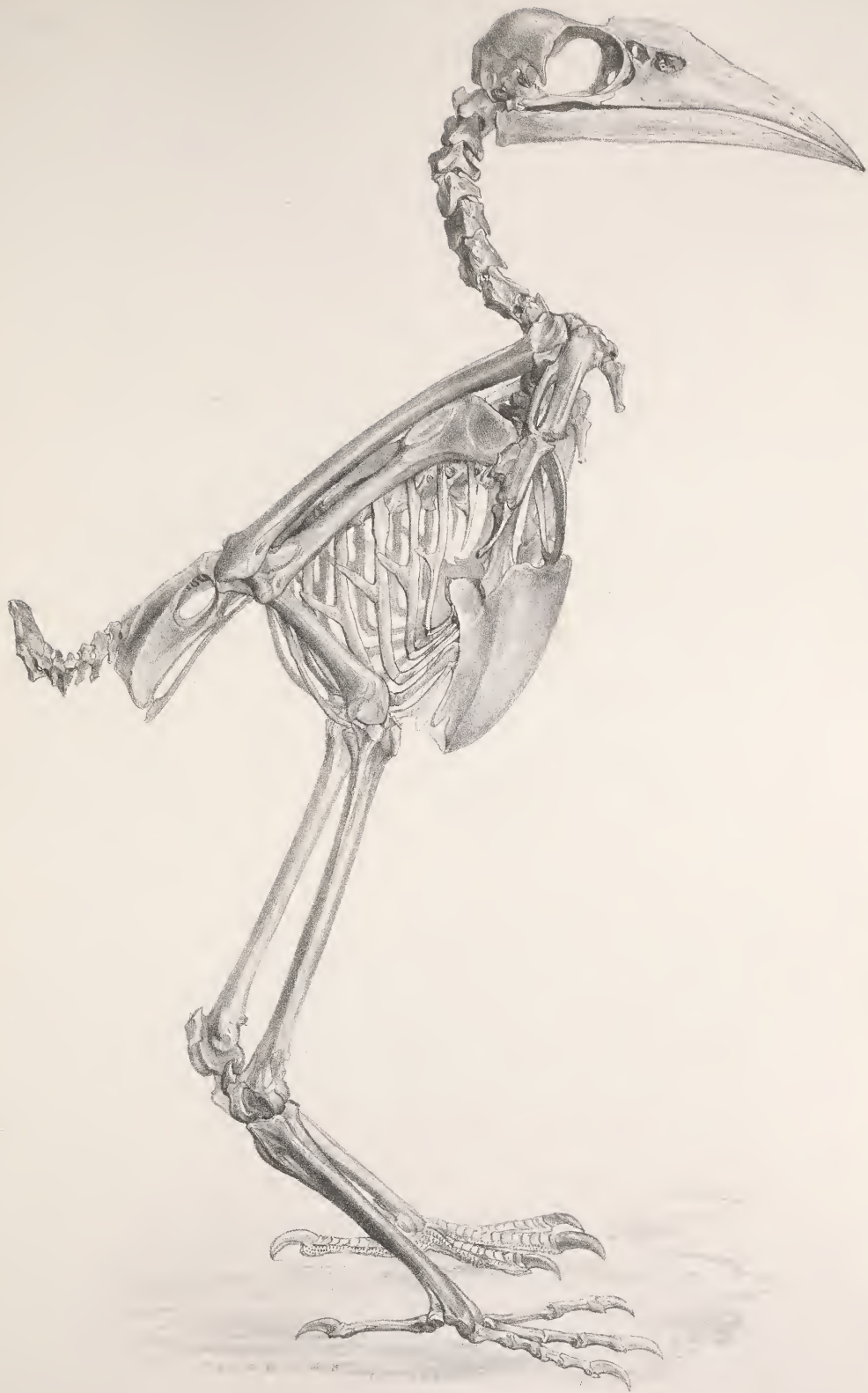


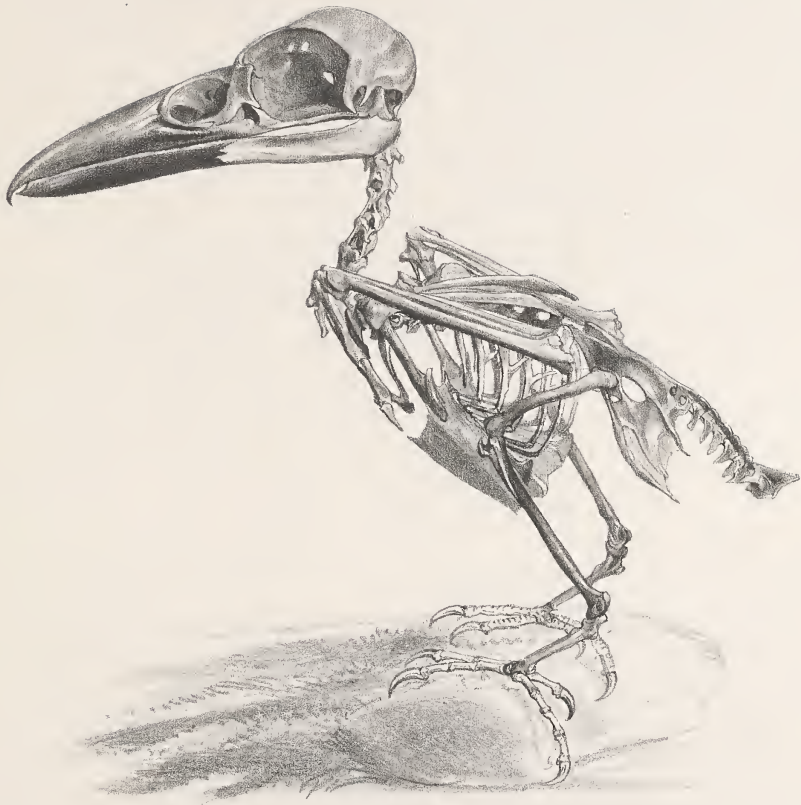
Fig. 1. *Totus Viridis*. — Fig. 2. *Alcedo Ispida*.



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Day & Son, Lith. to the Queen.

BUCEROS ABYSSINICUS.



From Nature on Zinc by J. Ericsson.

Dep. & Son, Lith. to the Queen.

CAPITO SWAINSONII.



From Nature on Zinc by J. Erxleben.

Day & Son, Lith'rs the Queen.

EURLAIMUS SUMATRANUS.



from Nature on Zinc by J. Bracon.

David Cox Lith. to the Queen.

CHRYSOTIS BRAZILIENSIS.

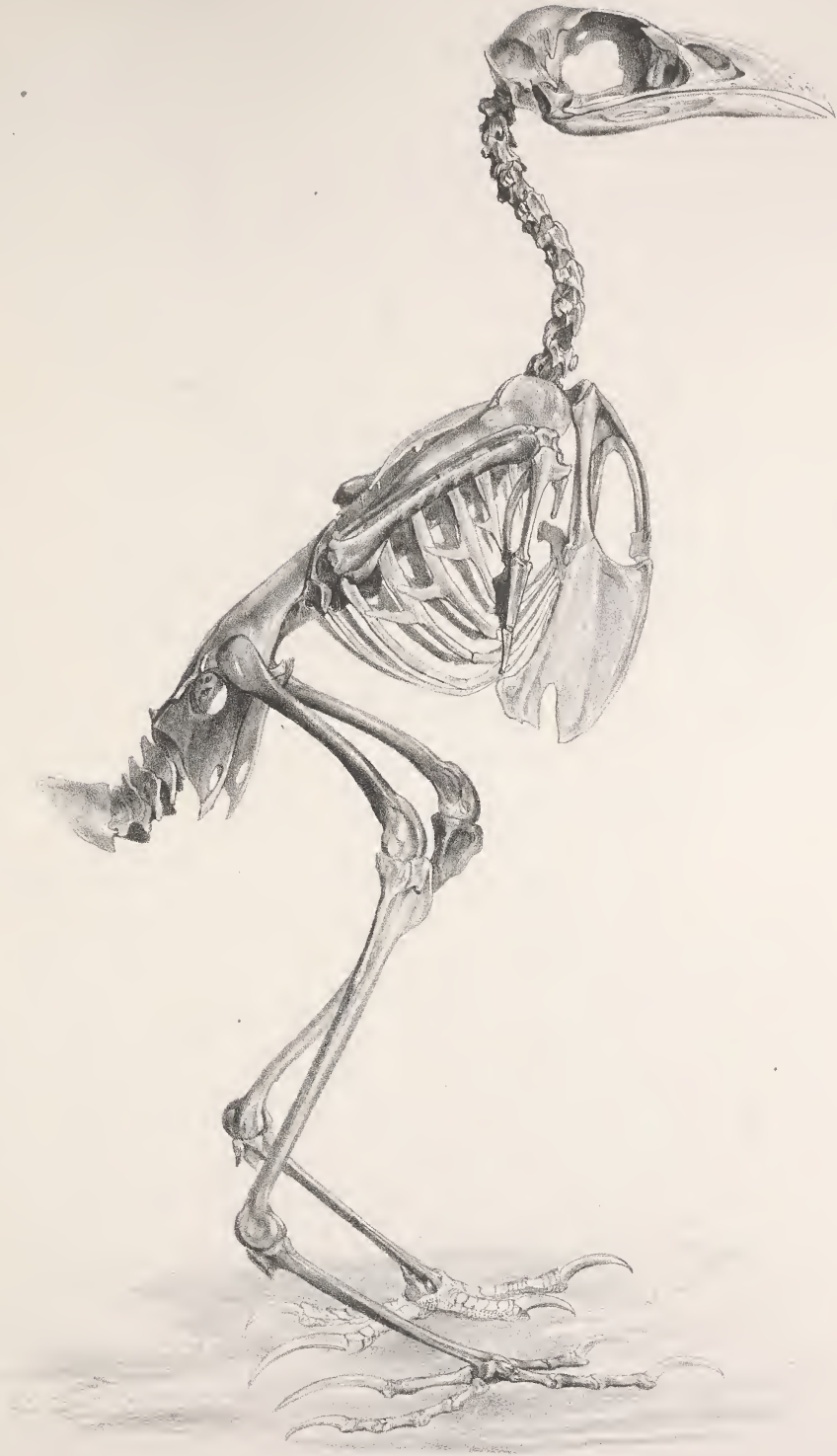




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By G. S. S. to the Queen.

GEVINUS DIMIDIATUS.



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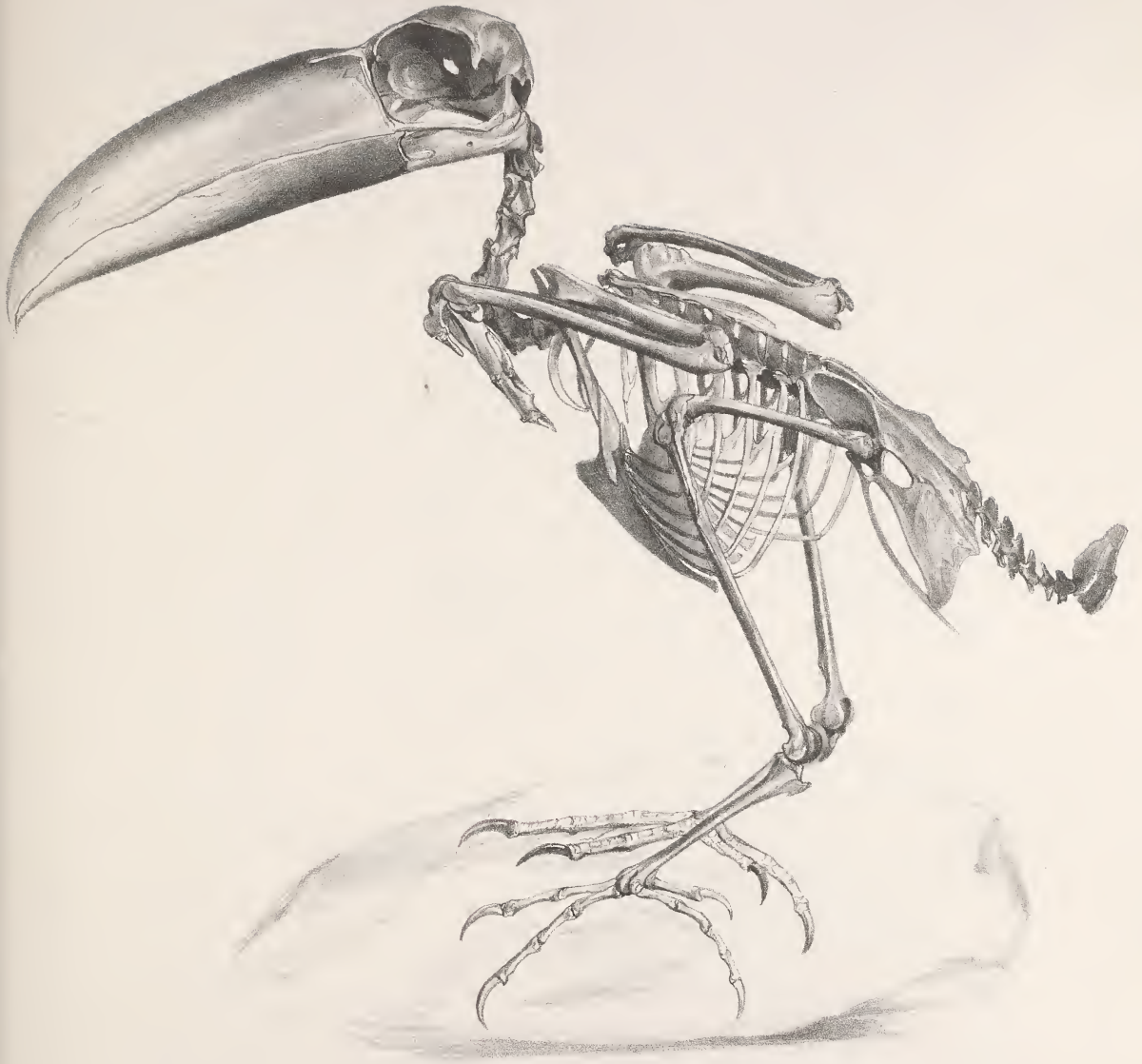
CENTROPUS PHASIANUS.



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TURACUS GIGAS.



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Day & Son Lith^{rs} to the Queen.

PTEROGLOSSUS BAILLONII.



From Nature on Zinc by J. Strahlen

Engl. Lit. Lith. in the States

CUCCOUS GLANDARIUS.





From Nature on Zinc by J. Ericsson.

Day & Son, Lith^{rs} to the Queen.

ZIPHOREYNCHUS TROCHILIROSTRIS.



From Nature on Zinc by J. Erxleben.

Day & Son, Lith^{rs} to the Queen.

AMTHOCHLERA LEWINII.





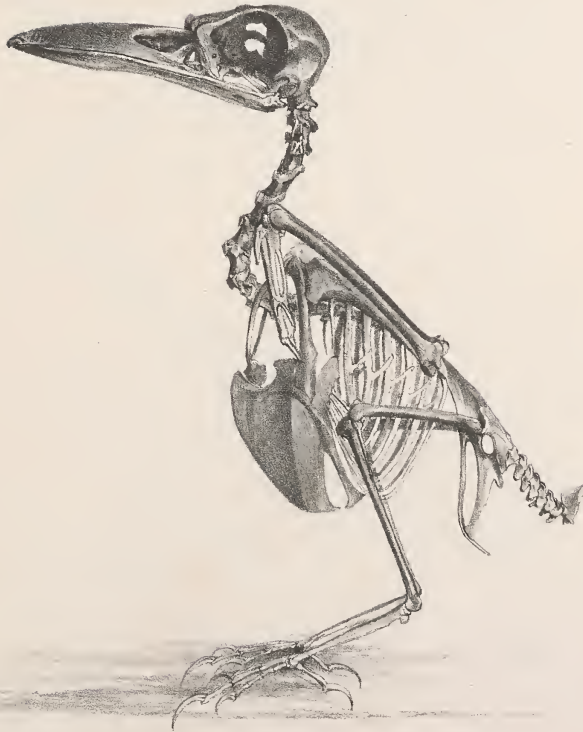
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Day & Son. 1785 to The Queen

1. SYLVA HIPPOLAIS. 2. PARULA BRAZILIANA.



2



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Day & Son, Lith^{rs} to Th. Queen.

1. TCHITREA MELANOPYGA. — 2. TYTYRA INQUISITOR.



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Day & Son, Lith^{rs} to The Queen.

TURDUS CHOKI .



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Day & Son, Litho to the Queen.

1. PLATYRHYNCHUS CANCROMUS. — 2. HIRUNDO RIPARIA.



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Day & Son Lith^{rs} to The Queen



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Day & Son Lith^{rs} to The Queen

CASSICUS BIFASCIATUS .



From Nature on Zinc by J. E. Wilson.

Day & Son, Lith^{rs} to the Queen.

1. DRYMOPHILA LORICATA. 2. LANIUS COLLURIO.



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Drawn from Life by the Queen

1. SALTATOR MAGNUS. 2. SPERMOPHAGA HEMATINA.



From Nature on Zinc by J. Erxleben

Drawn & Engraved by G. S. G. G. G.

CYPSURINA LEUCOPTERA.



From Nature on Zinc by J. Erxleben

Drawn & Engraved by J. G. Smith

GOURA CORONATA.



From Nature on Zinc by J. E. Leisler

Drawn by Sam. J. Smith for the Quercus

TETRAO UROGALLUS.



From Nature on Zinc by J. Kratoch

Day & Son, Litho to the Queen

CRANUS GLOBICERA.



From Nature on Zinc by J. Enderby.

Dep. & Sm. Litho to the Queen.

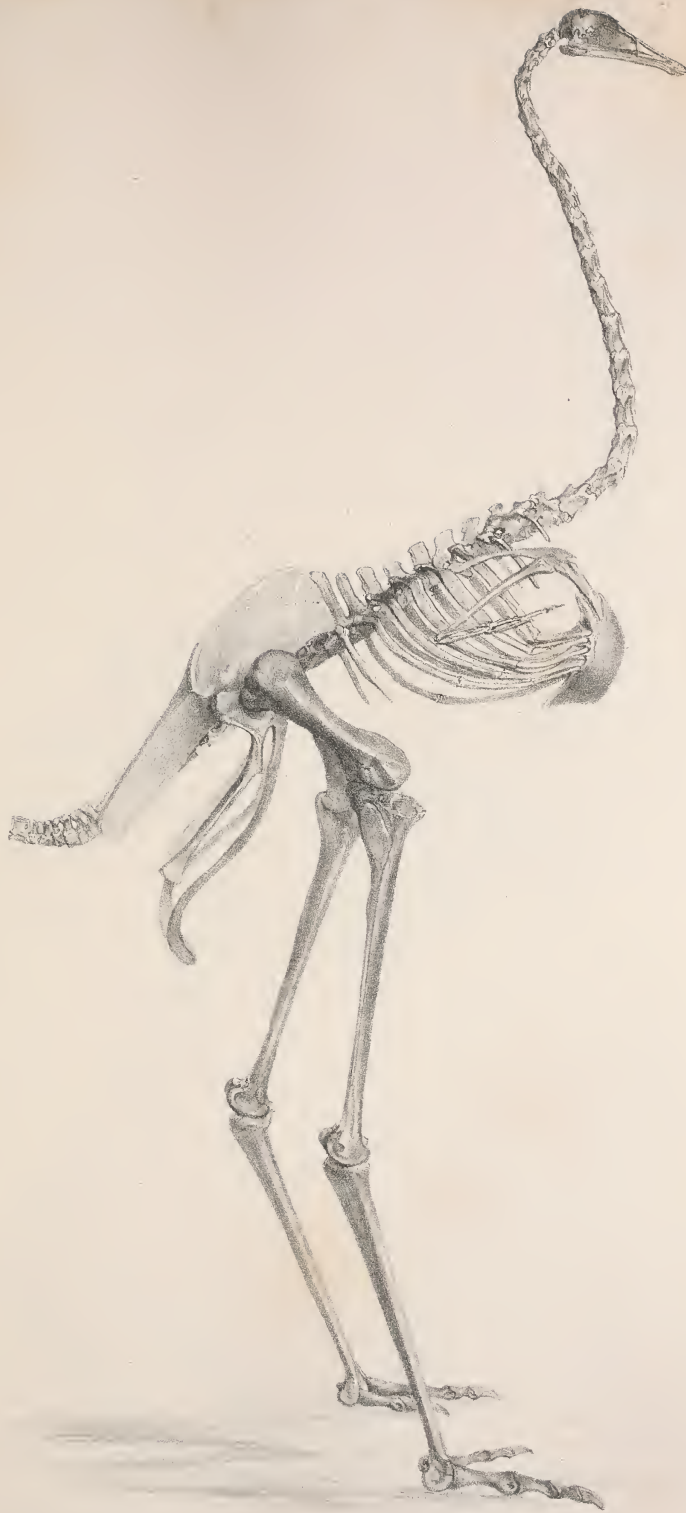
PHASIANUS NYCTHEMERUS.



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Day & Son, Lith. to the Queen.

OREOPHISIS DERBYANUS.



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Drawn & Engraved by G. G. G. G.

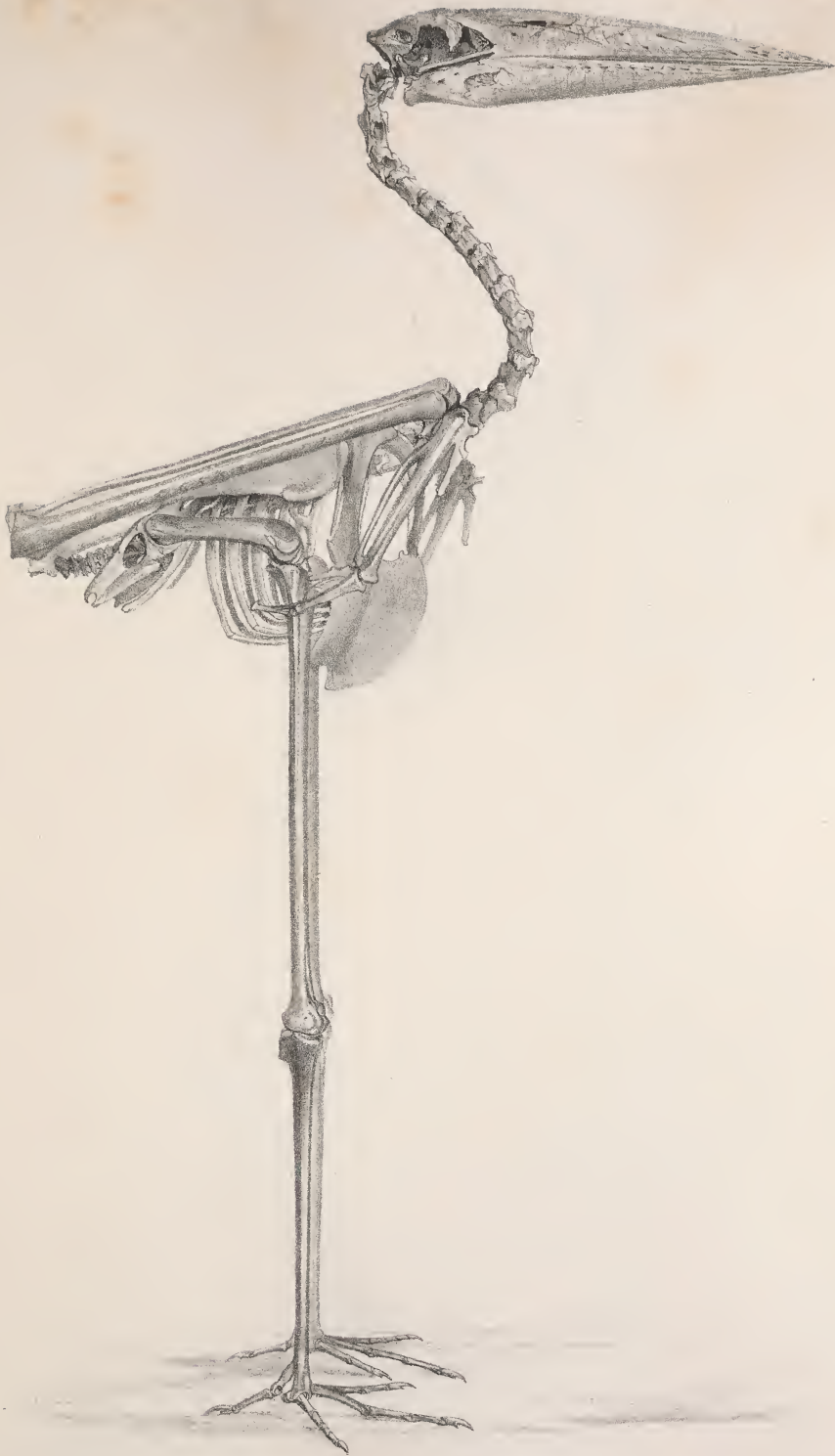
STRUTHIO CAMELUS



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Day & Son, Lith. to the Queen

OTIS HOUBARA.



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Day & Son, Litho to the Queen

LEPTOPHILUS ARGALA.



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Drawn & Engraved by W. H. Edwards

SCOPS VIRGO.



From Nature on Zinc by J. Eschsch.

Day & Son, Lith^{rs} to the Queen

CARJAMA CRISTATA



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Day & Sons, Litho to the Queen.

PHŒNICOPTERUS RUBER.



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Dryden & Son, Lith: to the press

PSOPHIA VIRIDIS.



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Day & Son. Litho. to the Queen

TRESKIONIS MELANOCEPHALA.

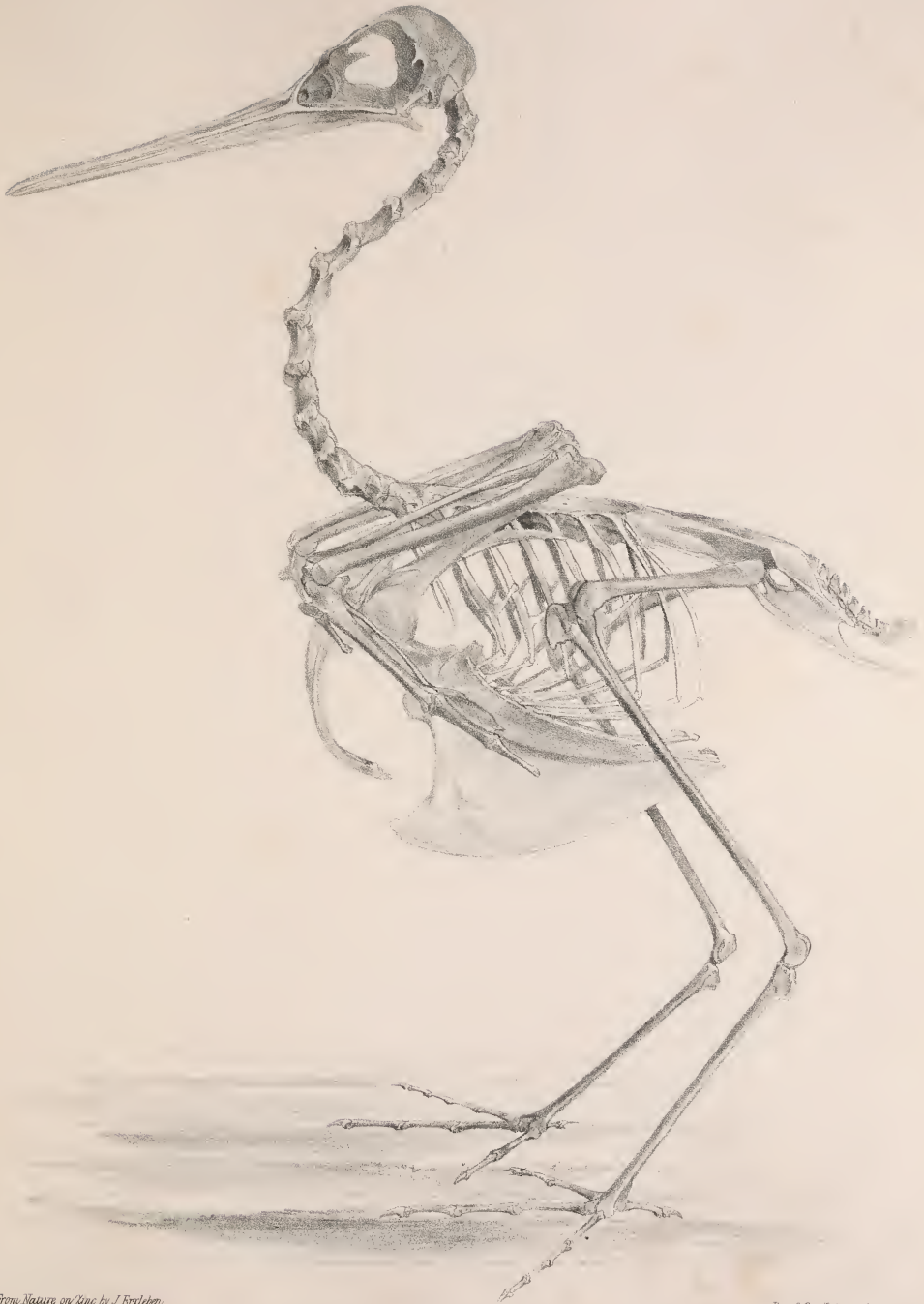




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Drawn & Engraved by the Queen.

HARPIPRION HAGEDACCH.



From Nature on Line by J. Eschsch.

Day & Son Litho in the Queen

TOTANUS GLOTTIS.





From Nature on line by J. Erxleben

Day & Son, Lith^{rs} to the Queen

SCOLOPAX RUSTICOLA.



From Nature on Zinc by J. Ericsson

Day & Sons, Litho to the Queen

LIMOSA RUF A.



From Nature on Zinc by J. Ericsson

Dep. & Son. Lith. to the Queen

HAMATOPUS CAPENSIS.



From Nature or Zinc by J. Eschsch

Day & Son, Litho to the Queen

HELIAS PHALENOIDES.



From Nature in line by J. Ericsson.

Buy & Sell with us the Queen

GLAREOLA PRATINCOLA.



From Nature on Zinc by J. E. Auden.

Day & Son, Litho to the Queen

ARAMUS SCOLOPACEUS.



From the collection of the British Museum

Drawn by J. S. G. 1847 for the gallery

CECICNEMUS LONGIROSTRIS.



From Nature on Zinc by J. Erxleben

Dry & Son, Lith^{rs} to the Queen

COLYMBUS SEPTENTRIONALIS.



From Nature on Zinc by J. Bräseben.

Day & Son, Lith^{rs} to the Queen.

PODICEPS CRISTATUS.



PL. 3.L.

From Nature on Zinc by J. Bosclet.

Day & Son, Lith^{rs} to the Queen.

URIA TROILE.



From Nature on Zinc by J. E. Lebon

Day & Son Lithrs to the Queen

EUDYPTES.

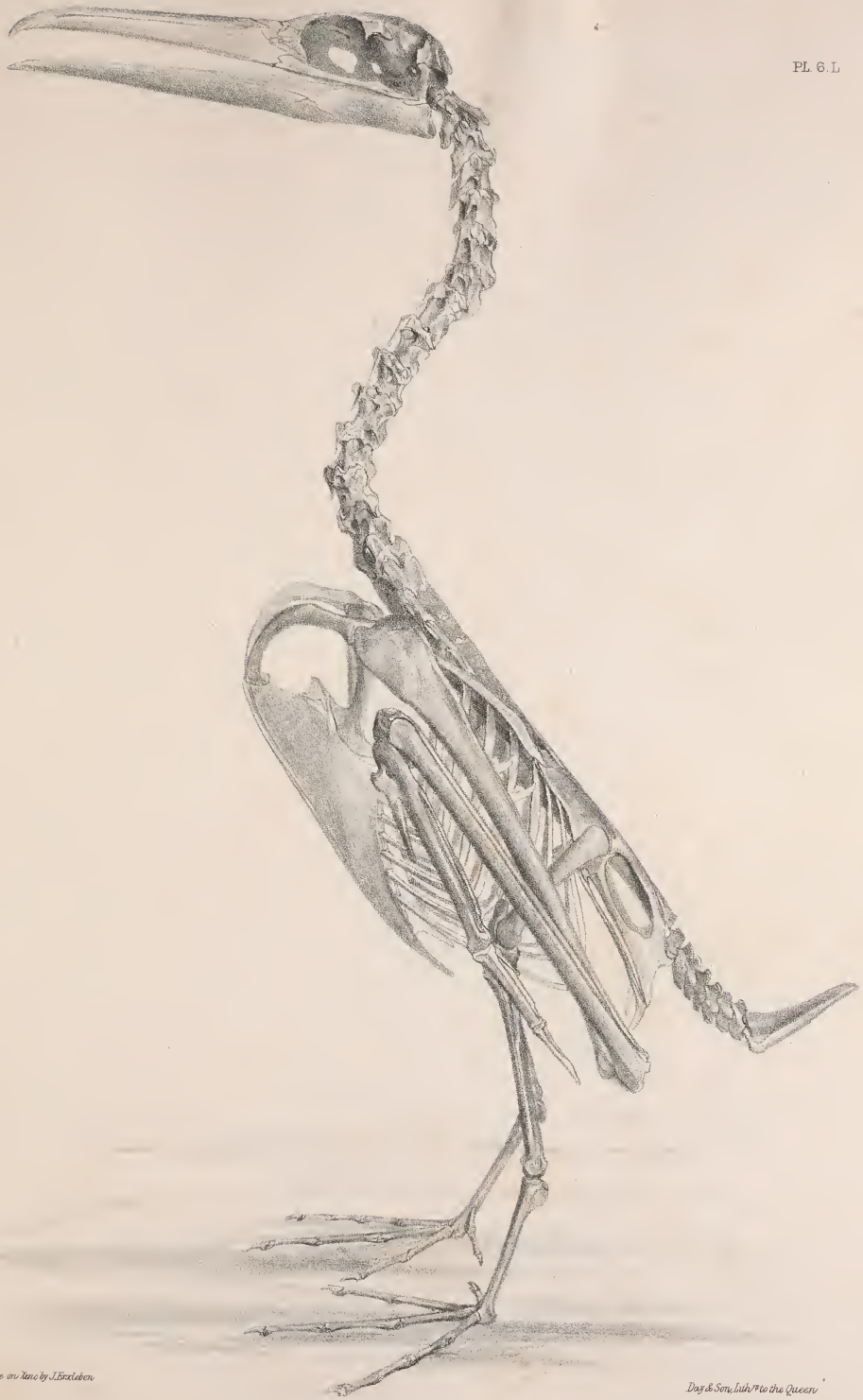




From Nature on Zinc by J. E. H. S. P.

Thy. & Son, Litho. to the Queen.

GRACULUS CRISTATUS.



From Nature on Zinc by J. Eschsch.

Deys & Son Lith^{rs} to the Queen

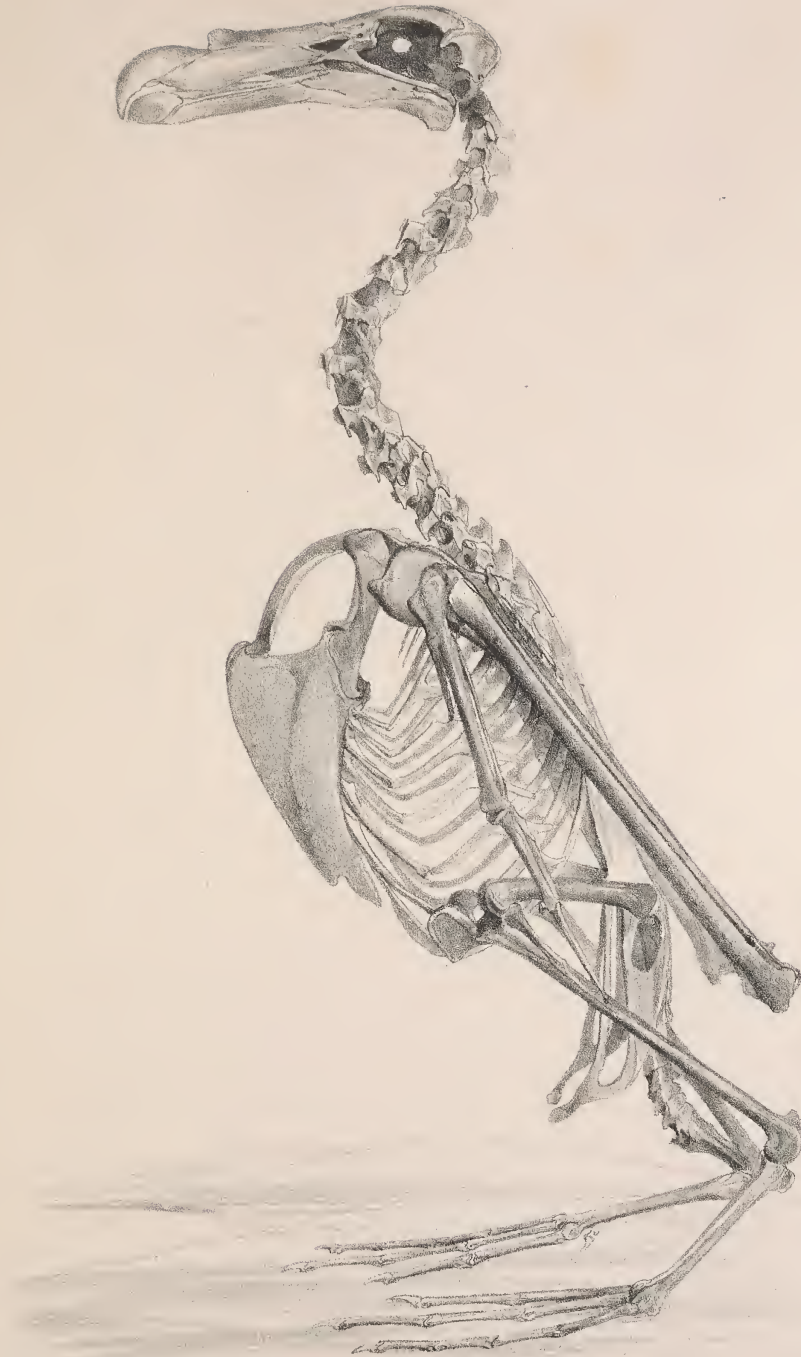
SOLA BASANA.



From Nature on Zinc by J. Erxleben

Drawn by Sen. Lutz to the Queen

ONOCROTALUS.



From Nature on line by J. Erxleben

Eng. & Sculp. Edw. P. to the Queen

PROCELLARIA GIGANTIA.



From Nature on Zinc by J. Eschsch.

Day & Son, Lith^{rs} to the Queen.

DIOMEDEA EXULANS.



From Nature on Zinc by J. E. Leber.

Dey & Sons Litho to the Queen.

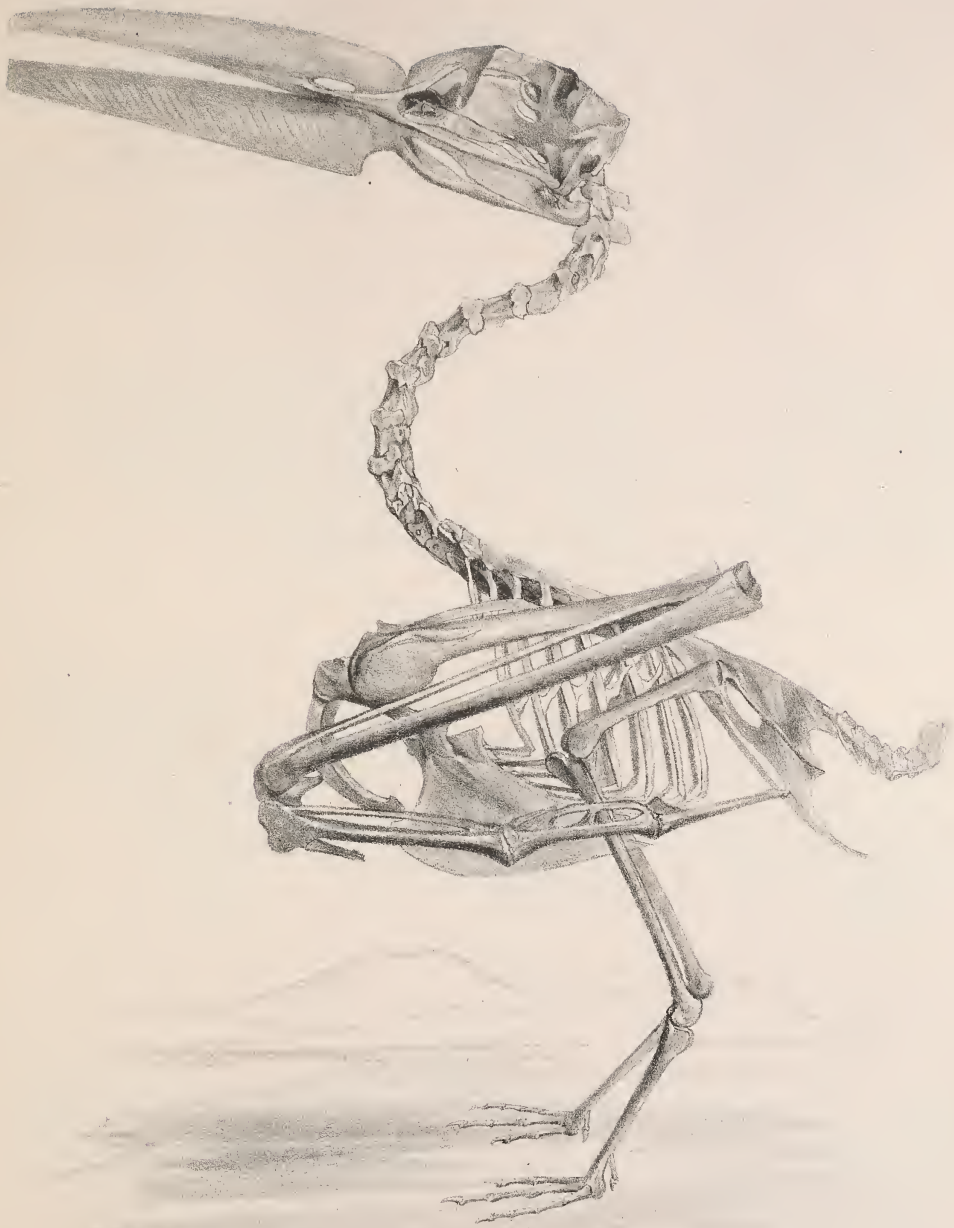
THALASSIDROMA PELAGICA.



From Nature on Zinc by J. Enderby.

Deas & Son, Litho to the Queen.

CHROICOCEPHALUS RIDIBUNDUS.



From Nature on Stone by J. E. Leche

Day & Son, Litho to the Queen

RHYNCHOPS NIGRA.

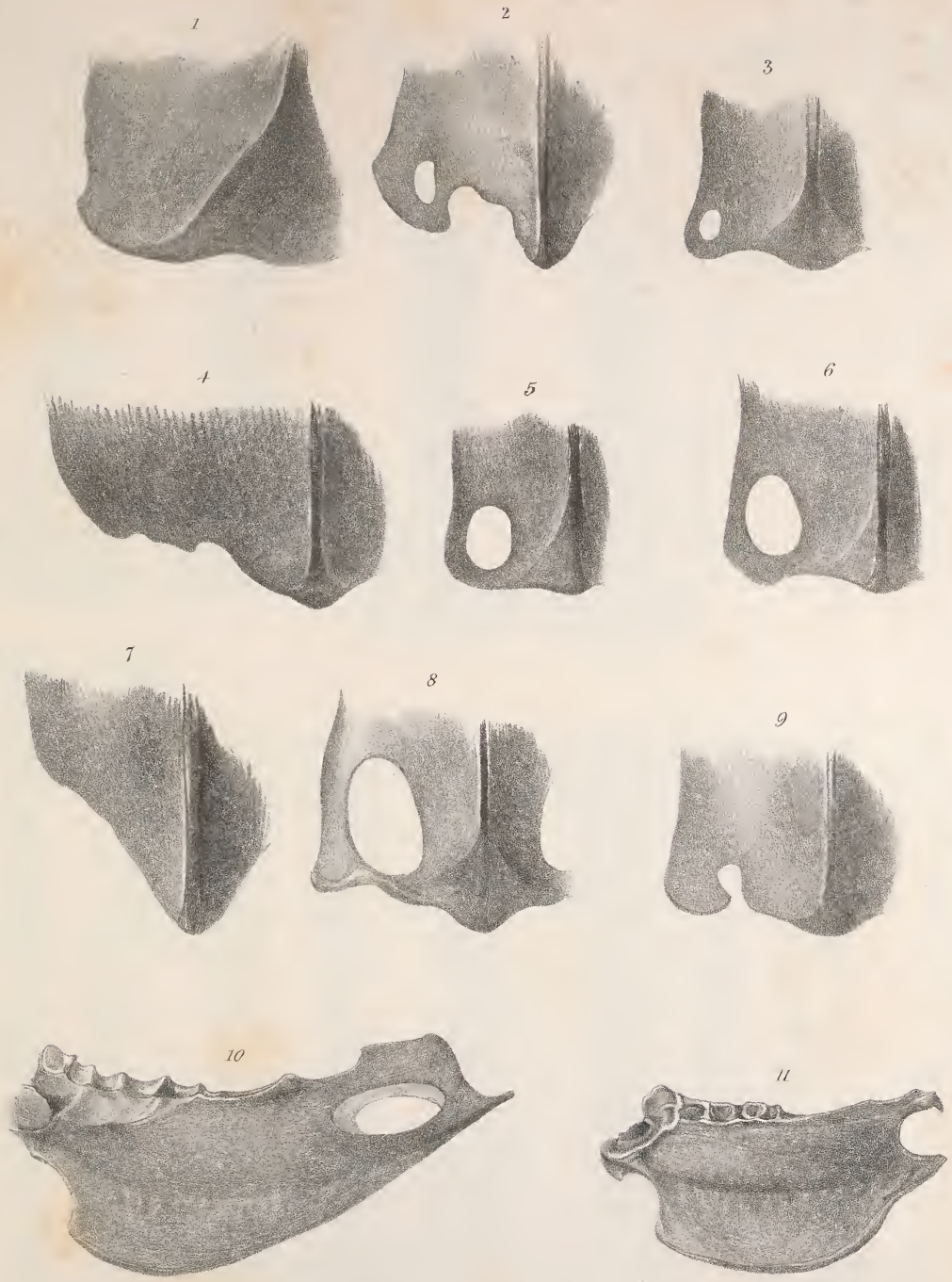


Fig 1. *Anas crysaetos*.
 " 2. *Cathartes aura*.
 " 3. *Nesophron peronopterus*.
 " 4. *Sarcorampus gryphus*.
 " 5. *Gyps Fulvus*.

Fig 6. *Vultur cinereus*
 " 7. *Serpentarius reptiliivorus*.
 " 8. *Cathartes rufus*.
 " 9. *Polyborus tharus*.
 " 10. *Gypaetos barbatus*.

Sarcorampus papa

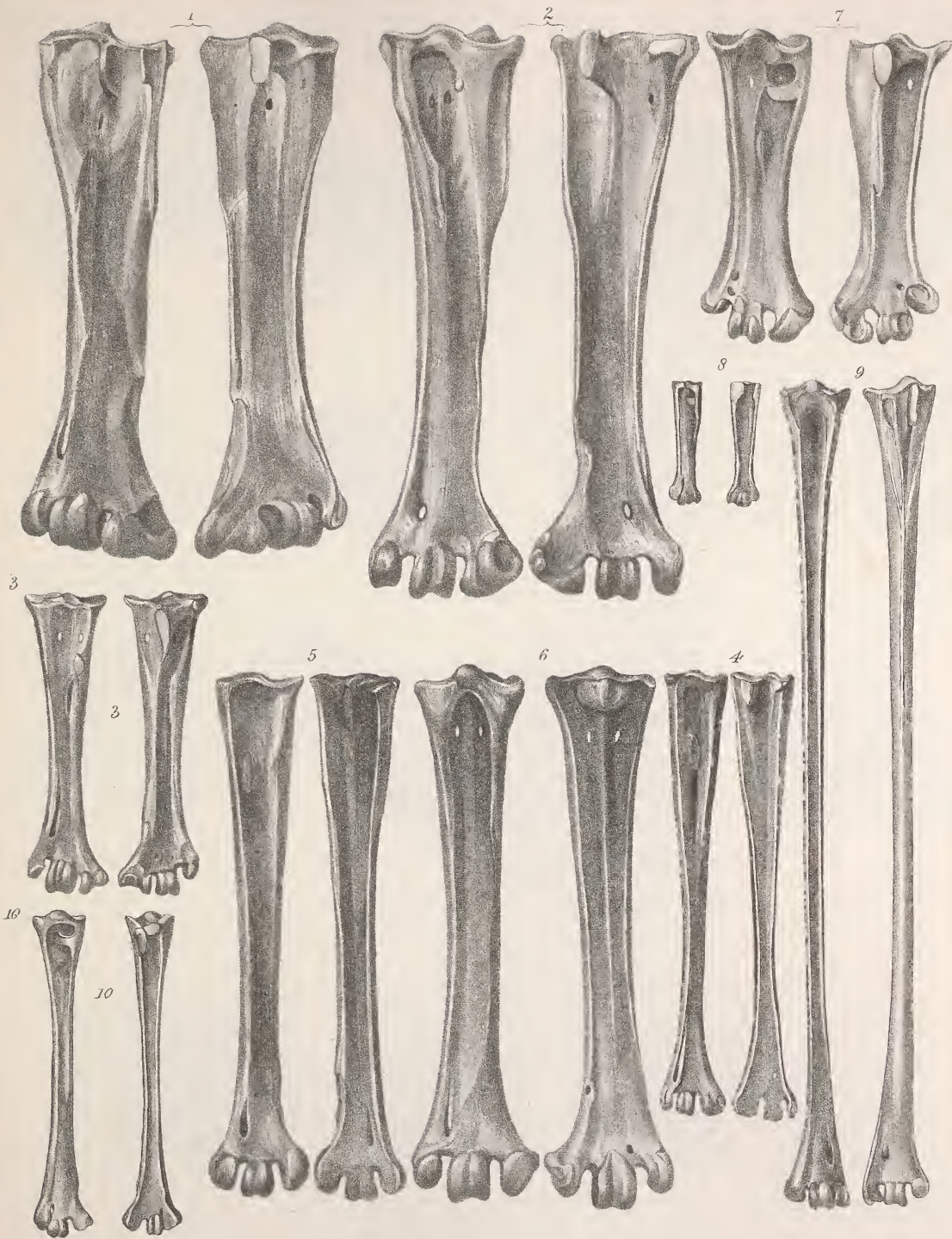


Fig. 1. *Dendrocygna septentrionalis*
 2. *Agelaius phoeniceus*
 3. *Falco peregrinus*
 4. *Strix cyaneus*
 5. *Agelaius phoeniceus*

Fig. 6. *Syrnium torquatus*
 7. *Nyctea nyctea*
 8. *Nyctea torquatus*
 9. *Serpentarius reptans*
 10. *Strix debilis*

PLATE 2. BIRD BONES.

DEPARTMENT OF AGRICULTURE.

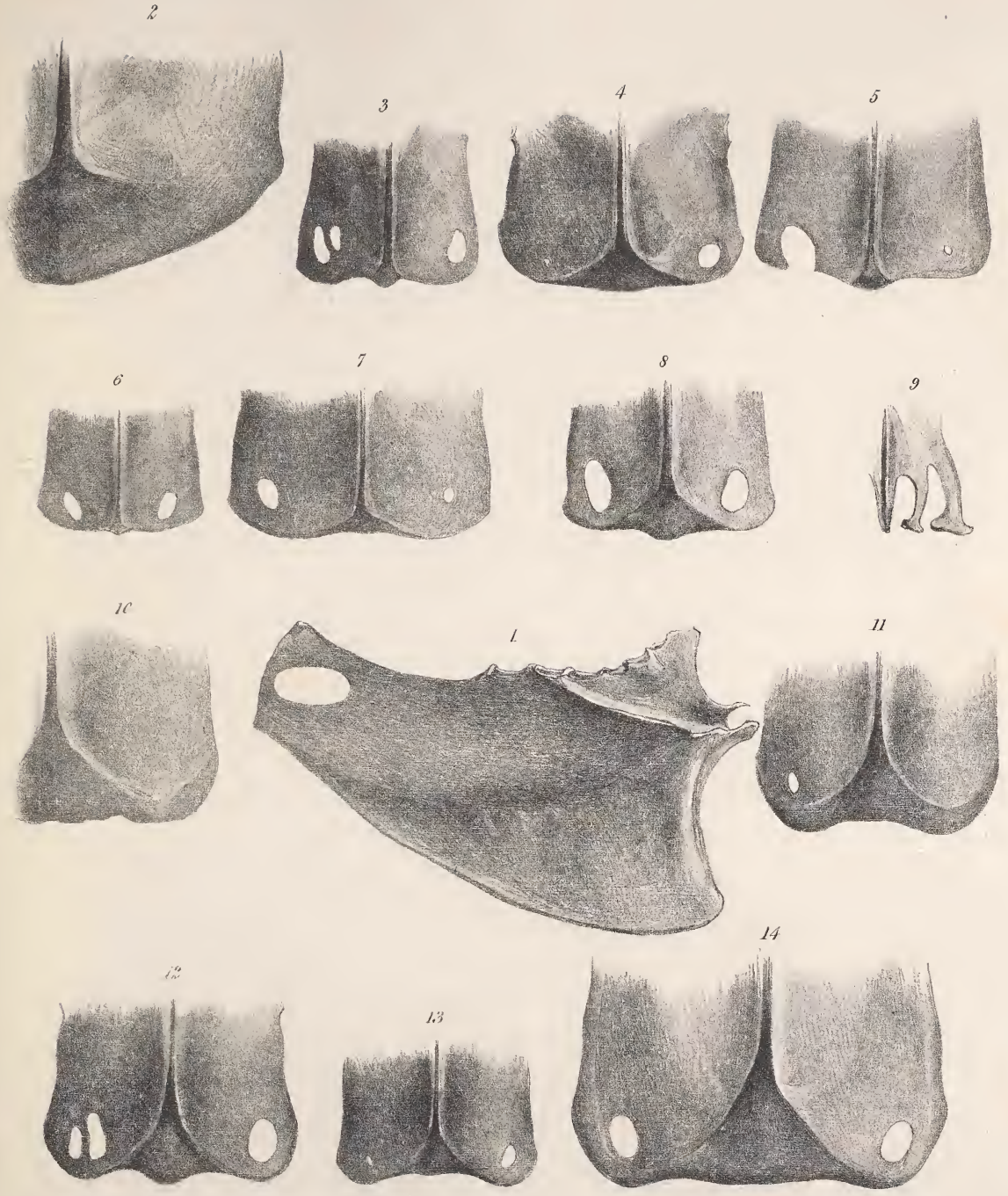


Fig. 1. *Falco Gyrfalco*.
 " 2. *Pandion Leucocephalus*.
 " 3. *Hieracidea Berigora*.
 " 4. *Circus Cyaneus*.
 " 5. *Ibycter Ater*.
 " 6. *Accipiter Virens*.
 " 7. *Mimus Migrans*.

Fig. 8. *Cyrnoides Uranectus*.
 " 9. *Hierac Bengalensis*.
 " 10. *Pandion Haliaeetus*.
 " 11. *Circus Brachydactylus*.
 " 12. *Spizacus Cirrhatus*.
 " 13. *Haliastur Ponticerianus*.
 " 14. *Aquila Navia*.

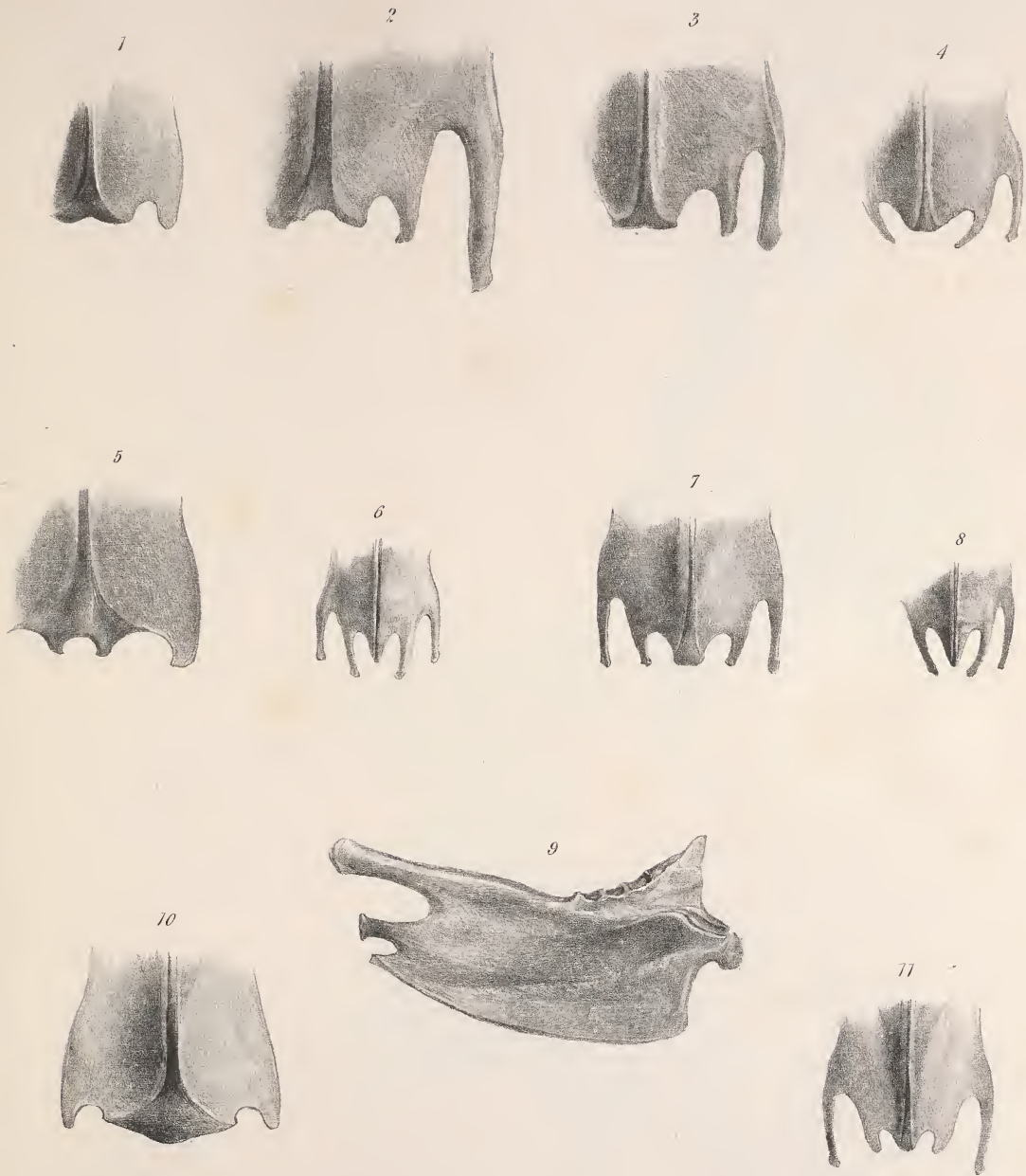


Fig. 1. *Strix Delicatulus.*
 " 2. *Nyctea Nivea.*
 " 3. *Lasiurus Javanensis.*
 " 4. *Eptesiles Grammicus.*
 " 5. *Strix Praticola.*
 Fig. 6. *Nyctale Tengmalmi.*
 " 7. *Asio Brachyotus.*
 " 8. *Noctua (Jamaica)*
 " 9. *Bubo Bengalensis.*
 " 10. *Strix Flammea.*
 Fig. 11. *Athene Marmorata.*



Fig 1. *Sarcorampus Papa*.
 " 2. *Aquila Cinerus*.
 " 3. *Nyctea Nivosa*.
 " 4. *Falco Peregrinus*.
 " 5. *Pandion Haliaetus*.

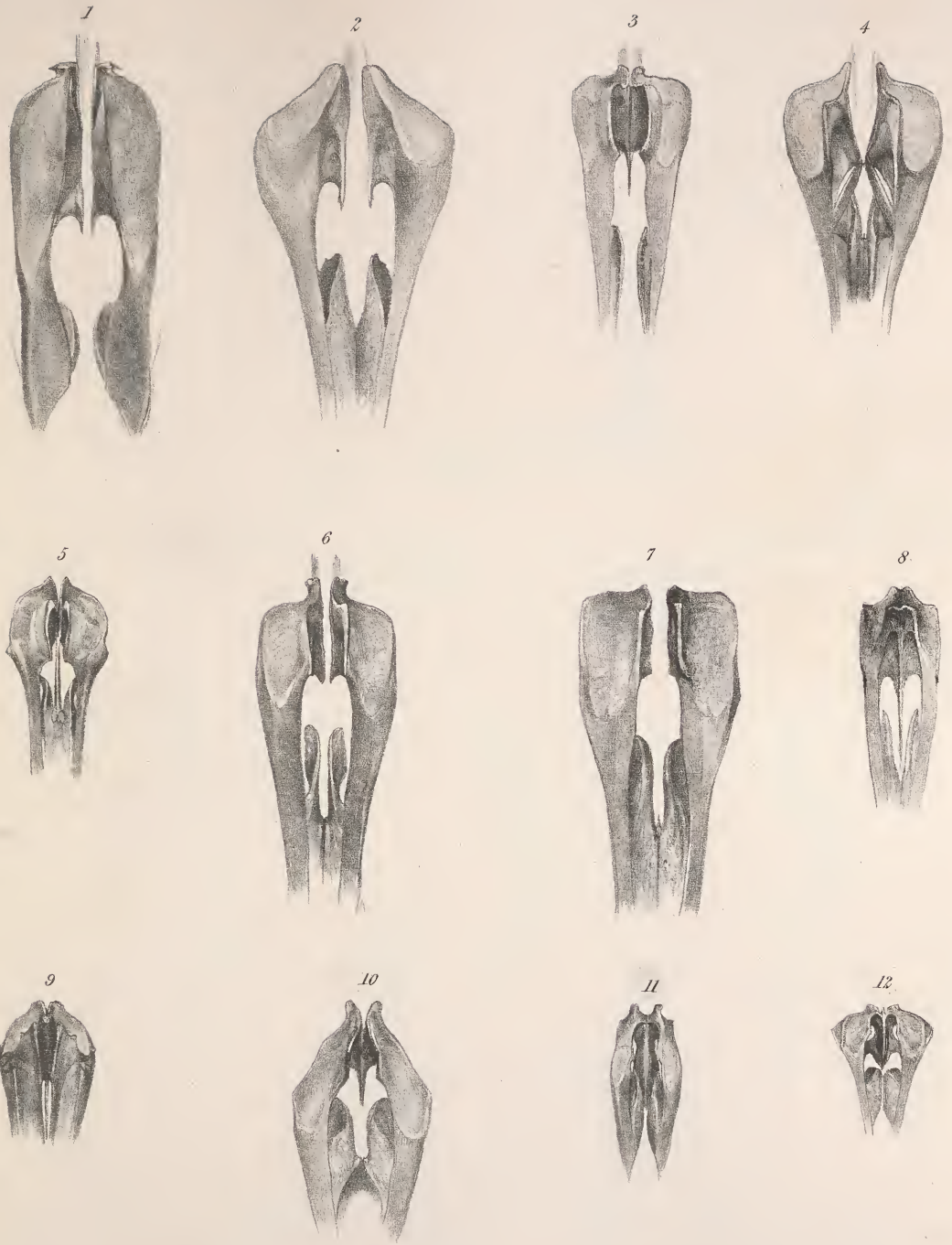
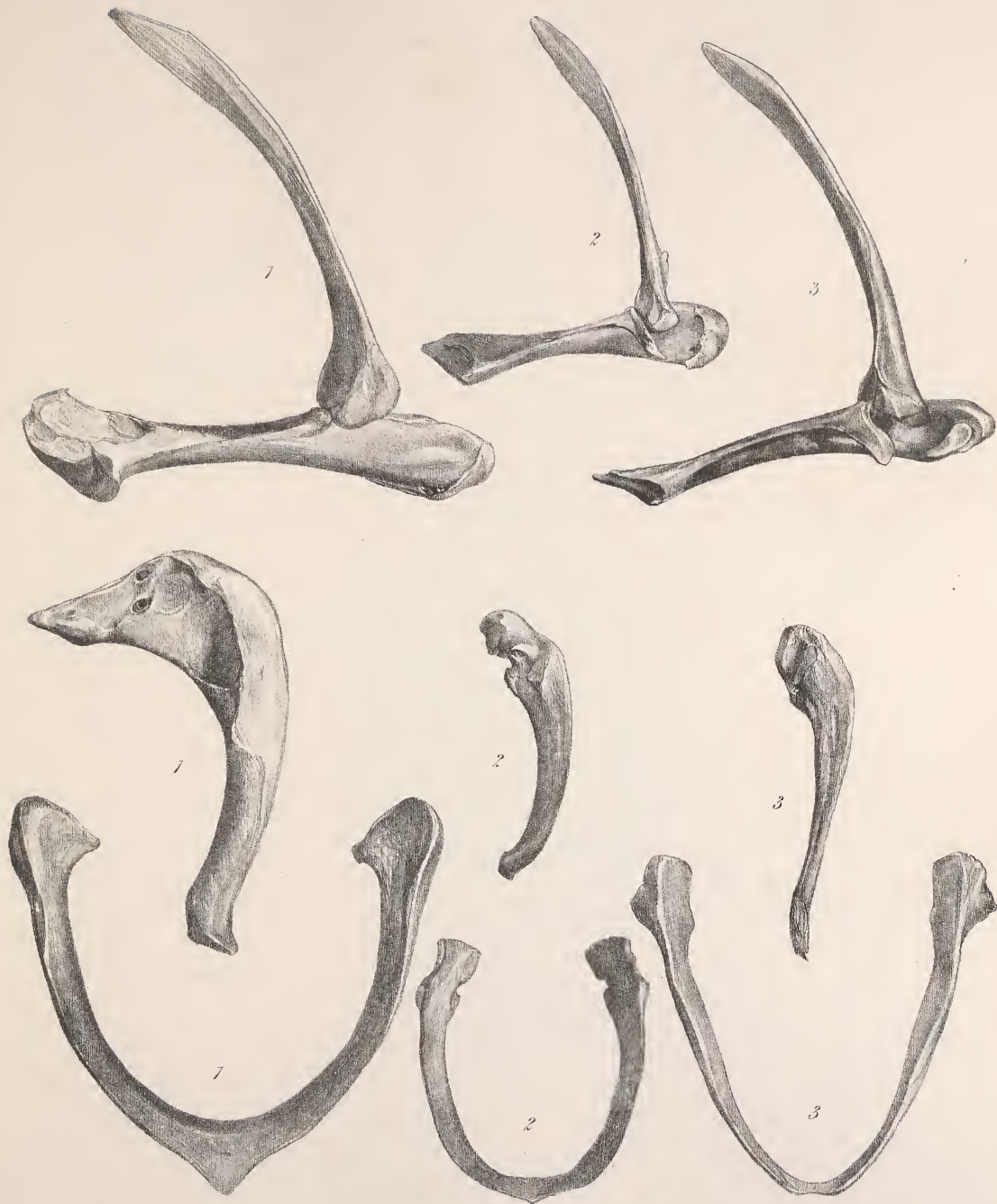


Fig. 1. *Sarcoramphus Gryphus*.
 " 2. *Serpentarius Reptilivorus*.
 " 3. *Neophron Percnopterus*.
 " 4. *Polyborus Tharus*.
 " 5. *Falco Peregrinus*.
 " 6. *Aquila Chrysaetos*.

Fig. 7. *Circus Brachydactylus*.
 " 8. *Sparcaetus Cirrhatus*.
 " 9. *Hieracidea Berigora*.
 " 10. *Buteo Nivea*.
 " 11. *Sorex Delicatulus*.
 " 12. *Asio Brachyotus*.

From *Nature on Zoology* by J. Erxleben.

Day & Son, Litho to the Queen.



From *Nature* on Zinc by J. Brzobdava.

Fig. 1. *Sarcorampinus Papa*.
 " 2. *Falco Peregrinus*.
 " 3. *Nyctea Nivosa*.

Day & Son, Lith^{rs} to the Queen.

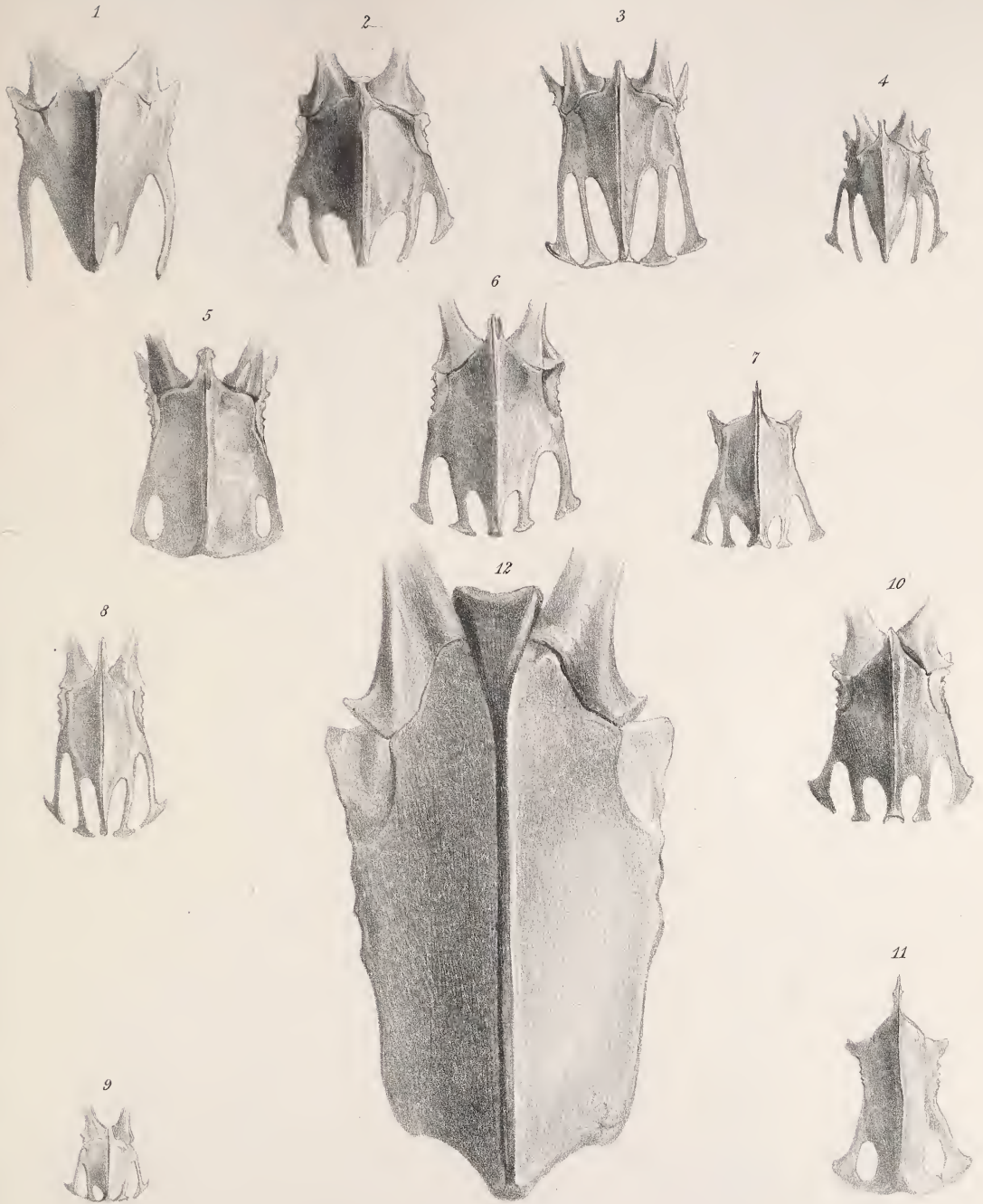
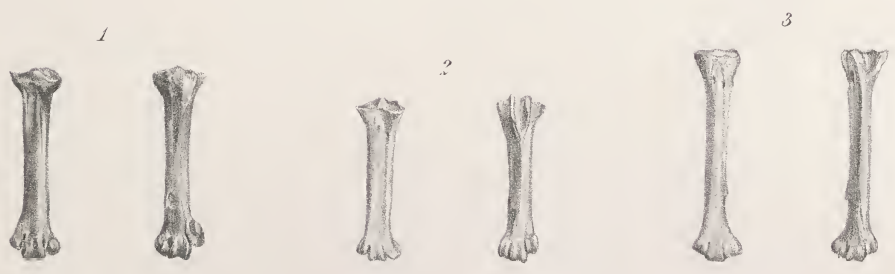
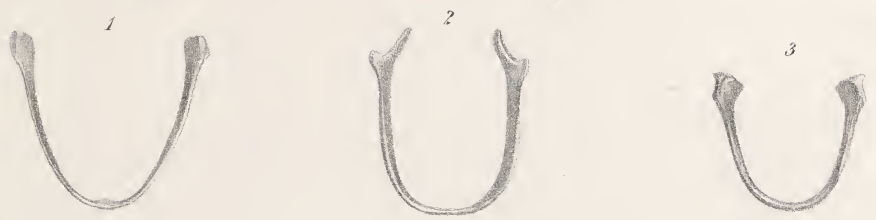
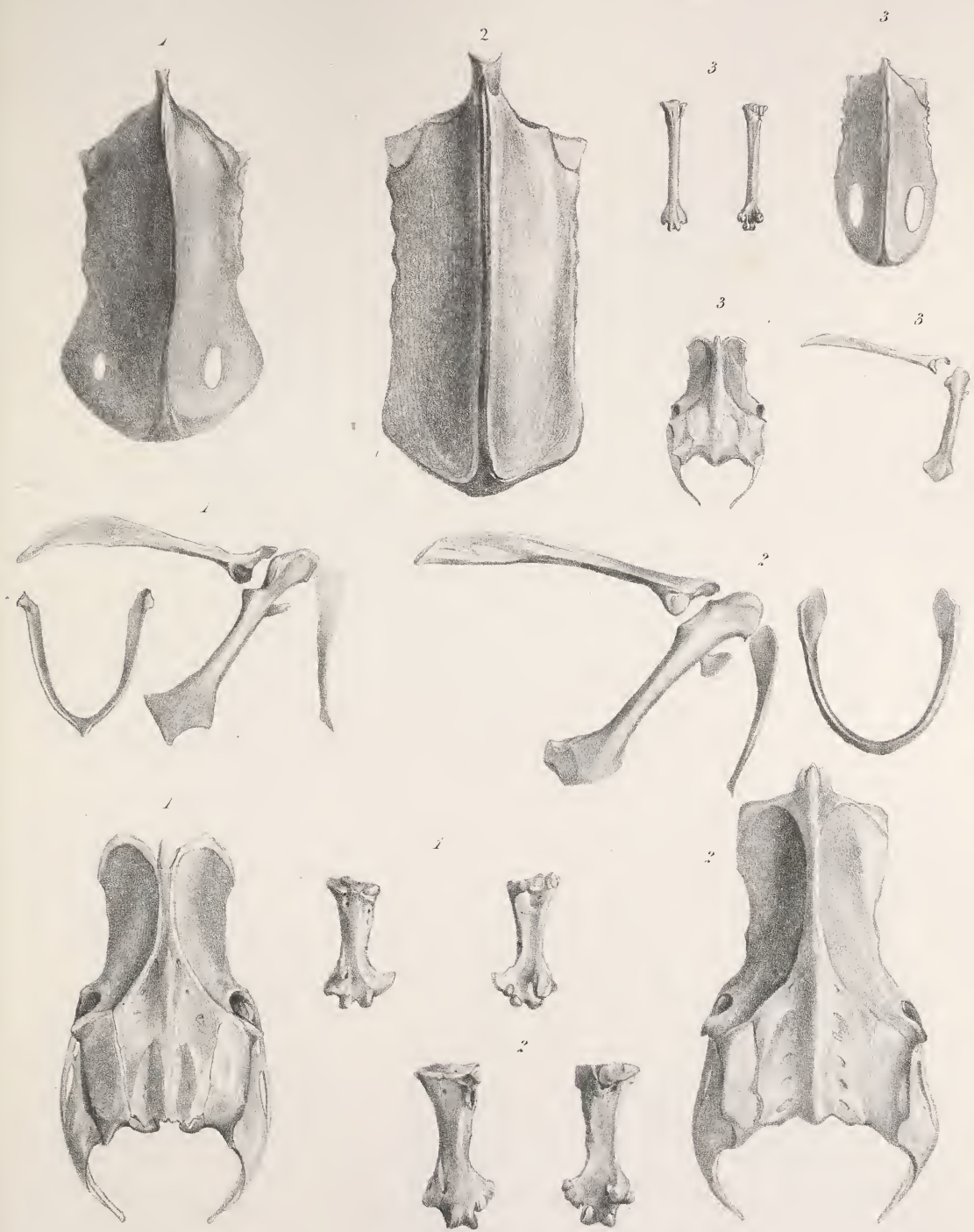


Fig. 1. *Podargus Humeralis*.
 " 2. *Harpactes Reinswartii*.
 " 3. *Megalaima Corvina*.
 " 4. *Cheloniidera Tenebrosa*.
 " 5. *Eurylaimus Samatranus*.
 " 6. *Eurystormus Orientalis*.

Fig. 7. *Alcedo Ispida*.
 " 8. *Merops Bicolor*.
 " 9. *Todus Viridis*.
 " 10. *Coracias Garrula*.
 " 11. *Upupa Epops*.
 " 12. *Buceros Abyssinicus*.



Figs. 1. *Podargus Humeralis*.
 „ 2. *Dacelo Leachii*.
 „ 3. *Pezoporus Formosus*.



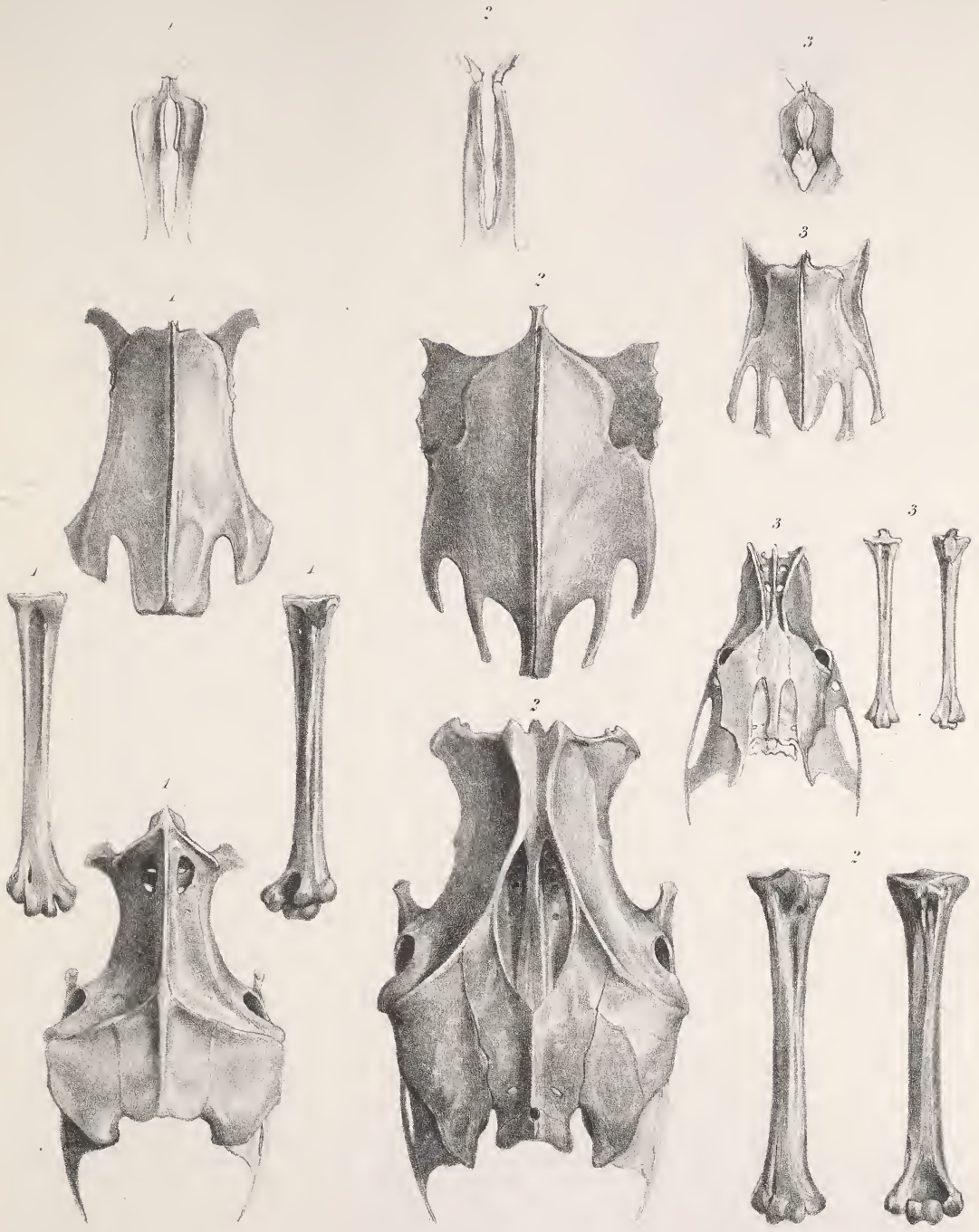
Figs 1. *Psittacus Erythacus*.
 ,, 2. *Calyptrorhynchus Baudini*
 ,, 3. *Pezoporus Formosus*.



Figs. 1. *Pellucius Erythacus*. — Figs. 2. *Cecinus Vordis*.



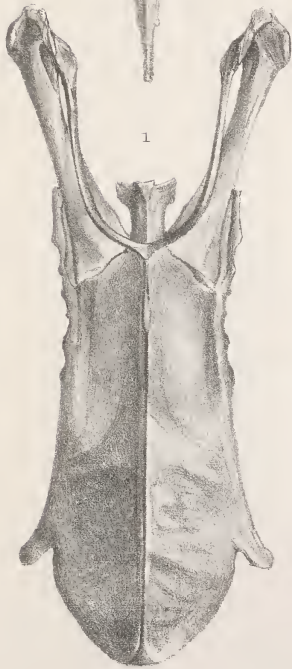
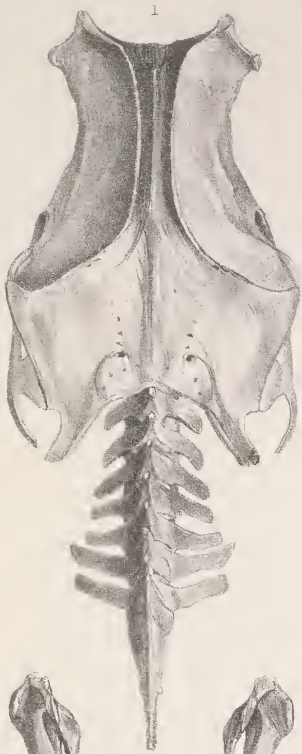
Fig. 1. *Podargus humeralis*.
 „ 2. *Harpactes Reinwartii*.
 „ 3. *Megalaima virens*.
 „ 4. *Chelonidera tenebrosa*.
 „ 5. *Eurylaimus sumatranus*.
 „ 6. *Dacelo gigantea*.
 Fig. 7. *Merops bicolor*.
 „ 8. *Todus viridis*.
 „ 9. *Coracias garrula*.
 „ 10. *Upupa epops*.
 „ 11. *Buceros panini*.
 „ 12. *Momotus brasiliensis*.



Figs. 1. *Centropus Phosionus*.
 „ 2. *Turacus Gigas*.
 „ 3. *Pteroglossas Baioceni*

in Nature on page 17. British

Doc. & Son. Lith. Co. N. Y.



From Nature et inc. by J. Enslin

by G. S. S. 1877 to the Queen

1. MENURA SUPERBA. 2. PTEROPTOCHOS ALBICOLLIS.



From Nature on Zinc by J. Erckson

Drawn by J. G. Rehn

1. TROPIDORHYNCHUS ARGENTICEPS. 2. TROGLODYTES TUMIDUS.
 3. TROGLODYTES VULGARIS. 4. HIRUNDO RIPARIA.
 5. NECTARINIA JAVANICA.



From Nature on Zinc by E. Sarsen

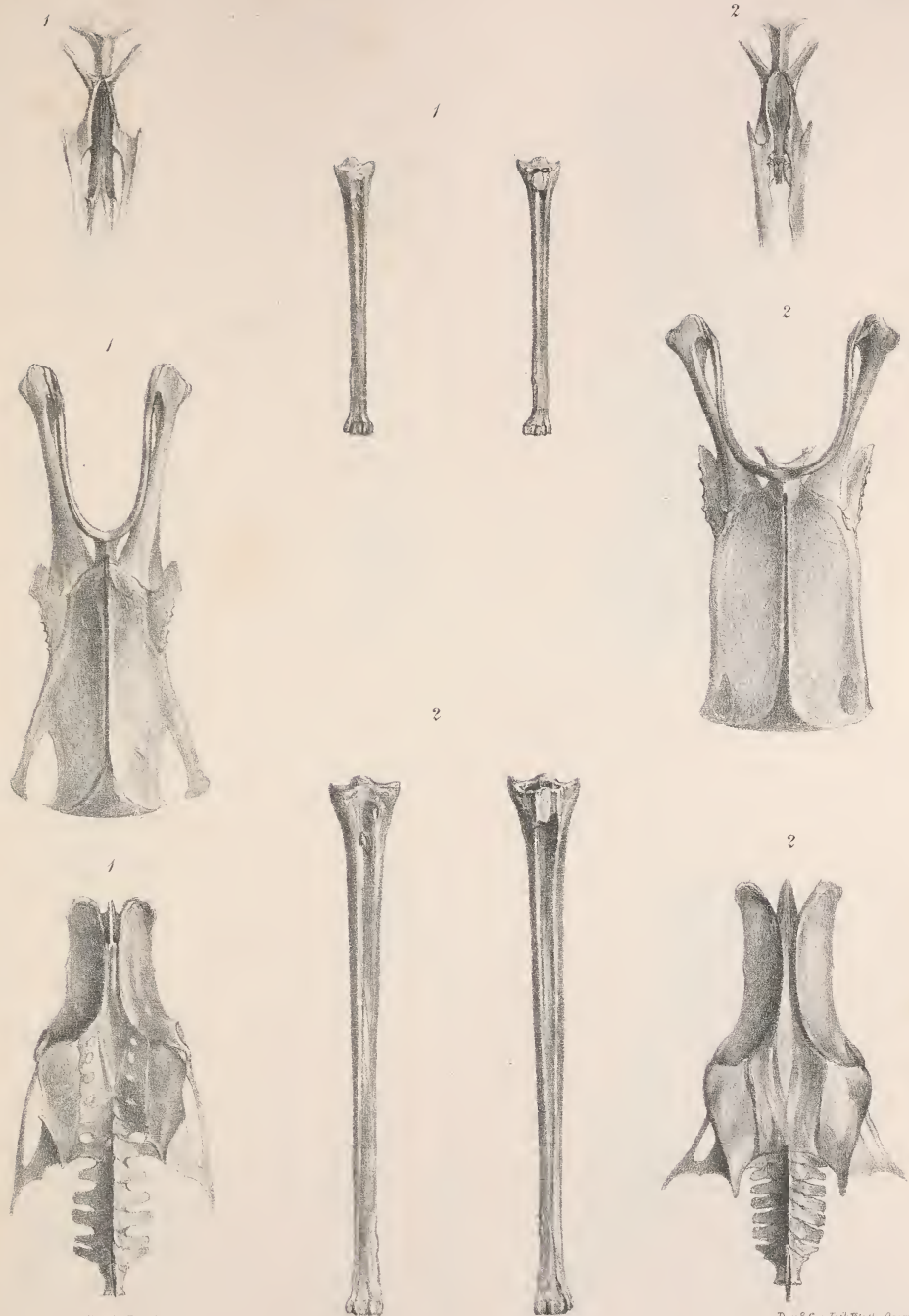
Day & Son Lithrs to the Queen

1. TYTYRA INQUISITOR. 2. PETRICOLA AURANTIA.
3. TCHITREA MELANOPYGA.



From Nature on Zinc by J. E. S. Leber.

1. ALAUDA ALPESTRIS. 2. PARUS CERULEUS
3. MALURUS CYANEUS. 4. PHELOMELA VULGARIS.



From Nature on Zinc by J. Brödelien

Drawn by Sam. Little for the Queen

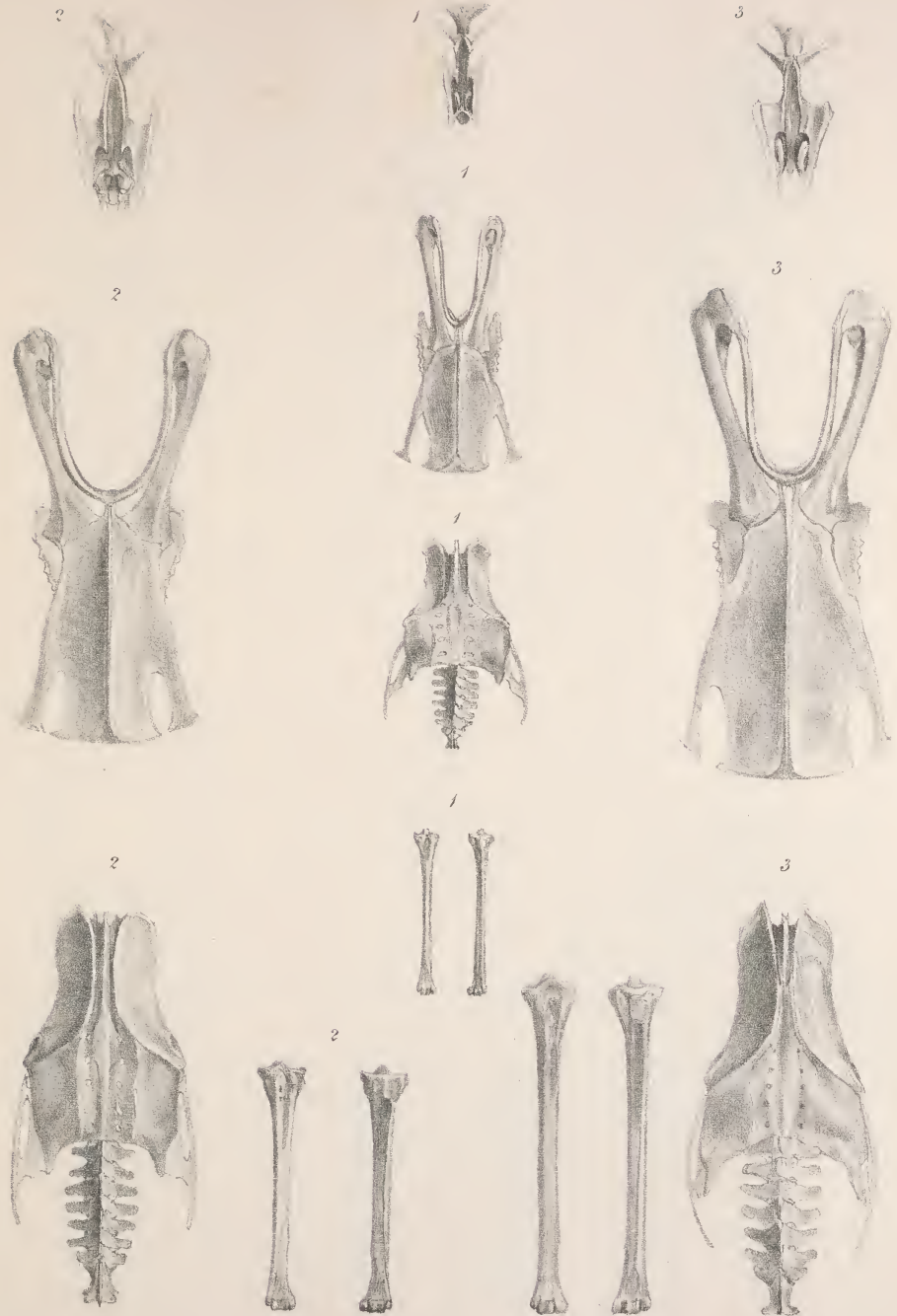
- 1. *Cassicus bifasciatus.*
- 2. *Neomorpha Gouldii.*



From Nature on June 15, 1870, by J. E. Huxley.

Day & Son, Litho to the Queen.

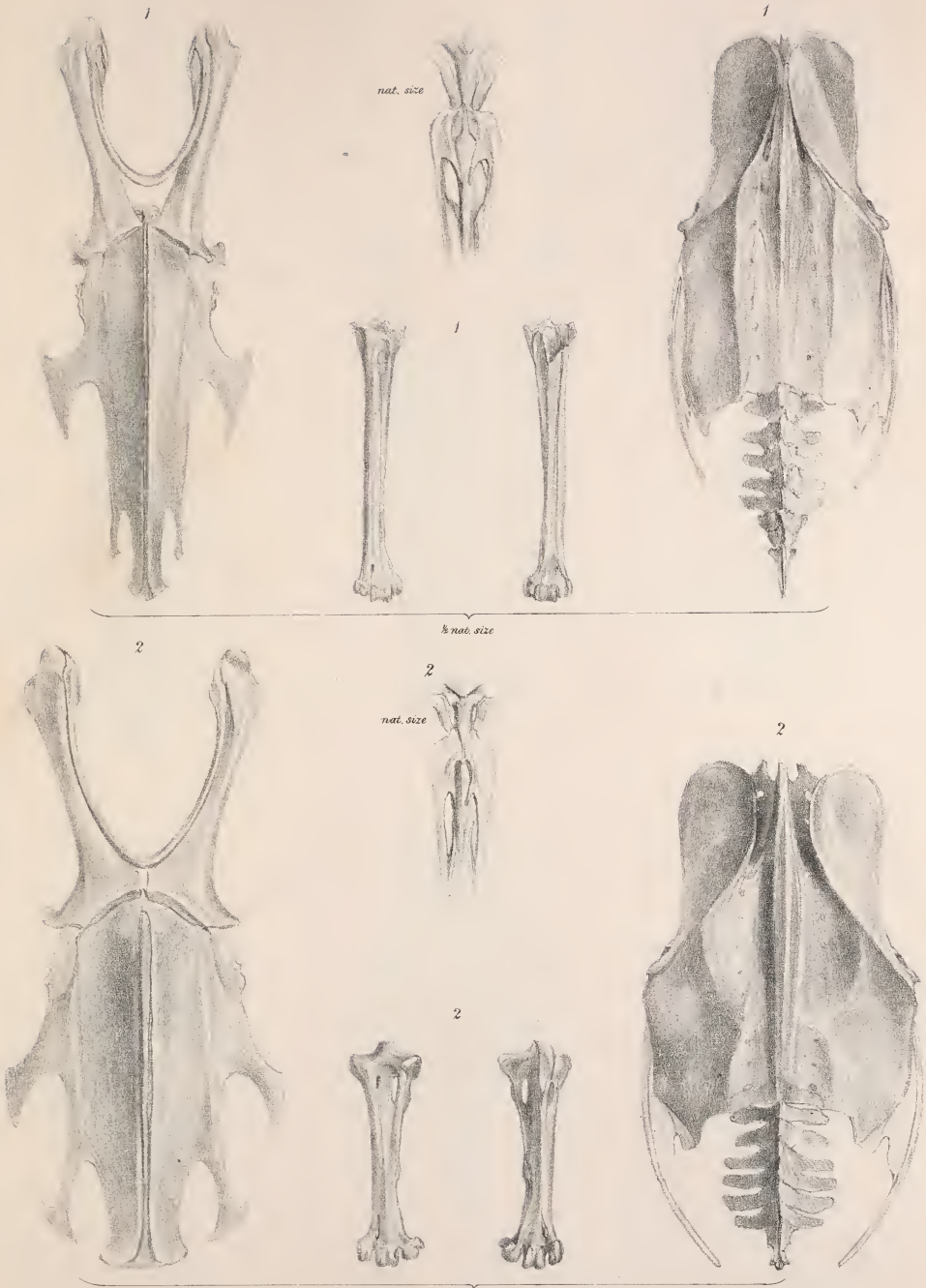
- 1. *Scolephagus major*.
- 2. *Cyclopius guanensis*.
- 3. *Cephalopterus pencluliger*.



From Nature on Zinc by J. Eschsché

Day & Sons, Litho to the Queen

1. *Saltator magnus.*
2. *Gypsrhina leucoptera*
3. *Fregilus graculus.*

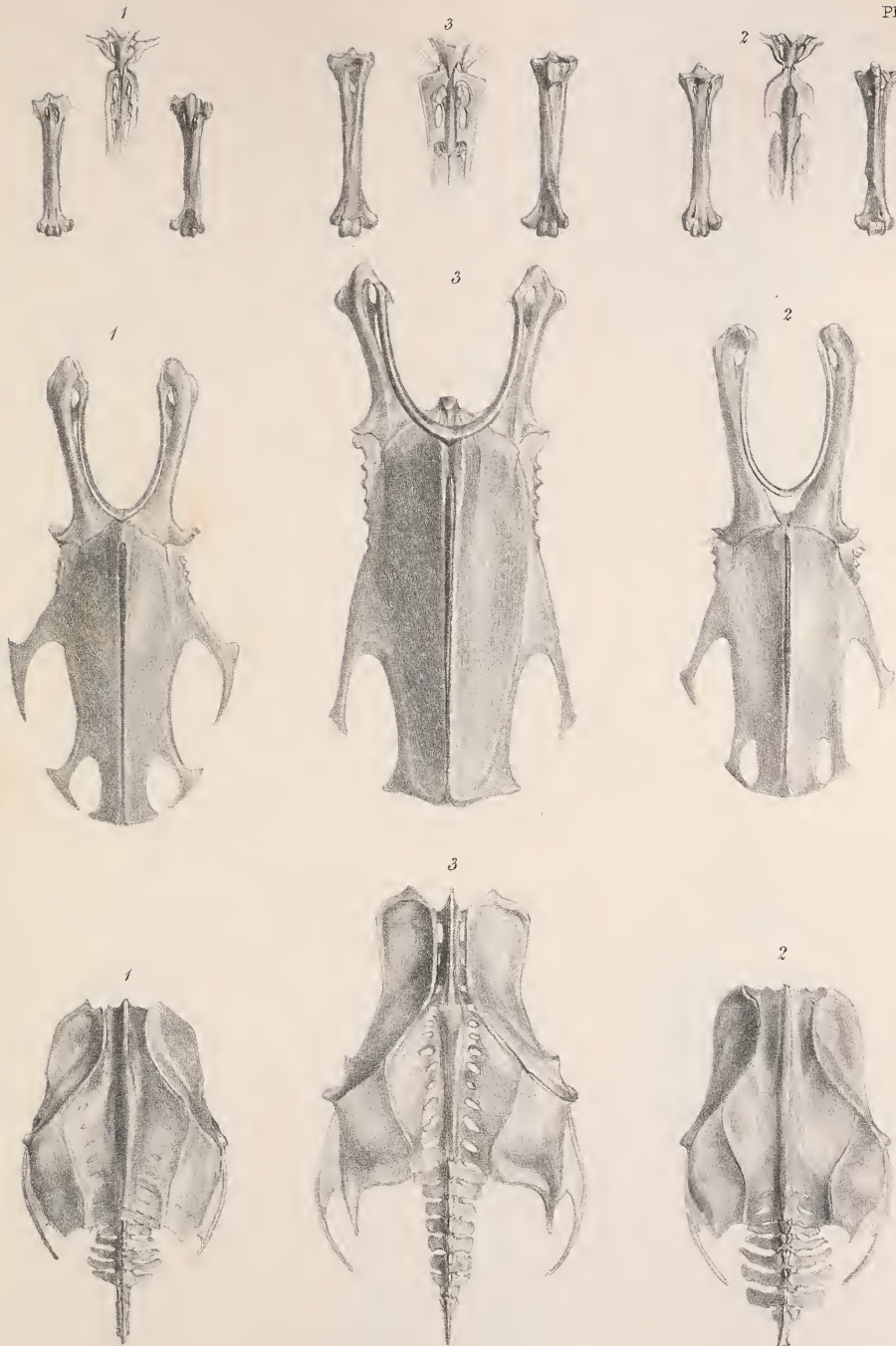


From *Nature on Zinc* by J. E. Lehen.

nat. size

Dep. & Sm. Inst. to the Queen.

- 1. *Goura coronata*
- 2. *Columba magnifica*



From Nature on Zinc by J. Eizleben.

Day & Son, Lith^{rs} to the Queen.

1. *Phalacrotreron nudirostris*
2. *Ptilinopus sanctus*
3. *Attagus Gayi*

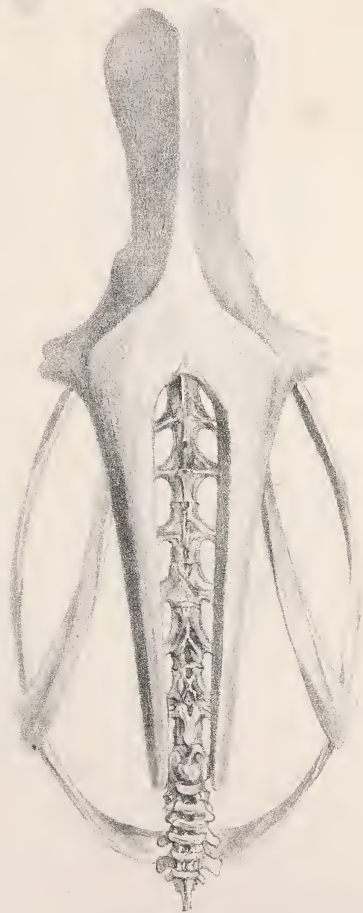
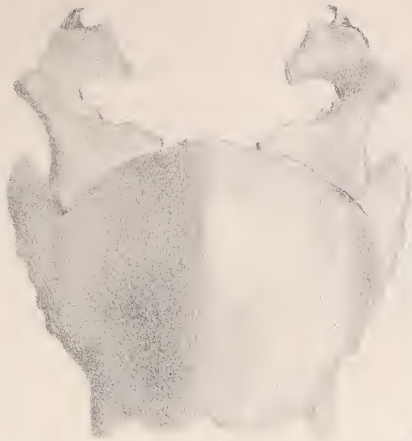


From Nature on Stone by J. Eschschau

$\frac{1}{2}$ nat. size

Dry & Son, Lith^{rs} to the Queen

- 1. *Lophortyx californicus.*
- 2. *Crax globicera.*



From Nature on Zinc by J. Eschsch.

Dup. 650n. Lith. P. to the Queen.

Struthio Camelus.



From Nature on Zinc by J. Enxleben.

Day & Son, Litho to the Queen.

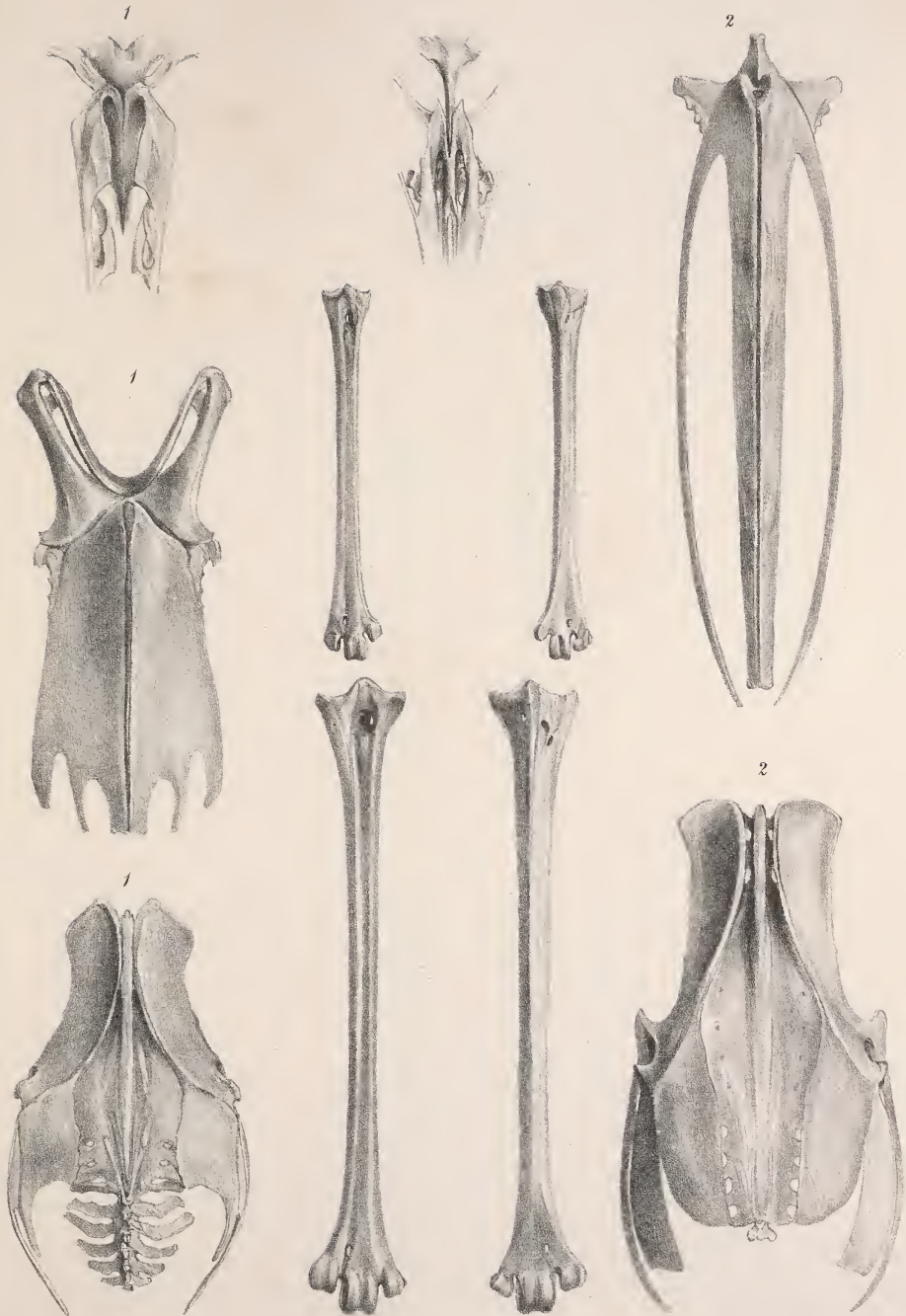
Casuarium emu.



From Nature on Zinc by J. Etchebeu

Day & Son, Lith. to the Queen

Apterix Australis



From *Nature in Asia* by J. Erskine

Drawn by S. J. L. P. to the Queen

1. *Otis Houbara*.
2. *Tinamus Brasiliensis*.



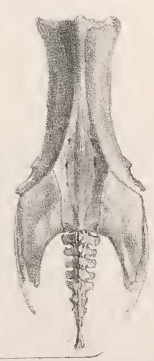
1/2 nat. size



2



2

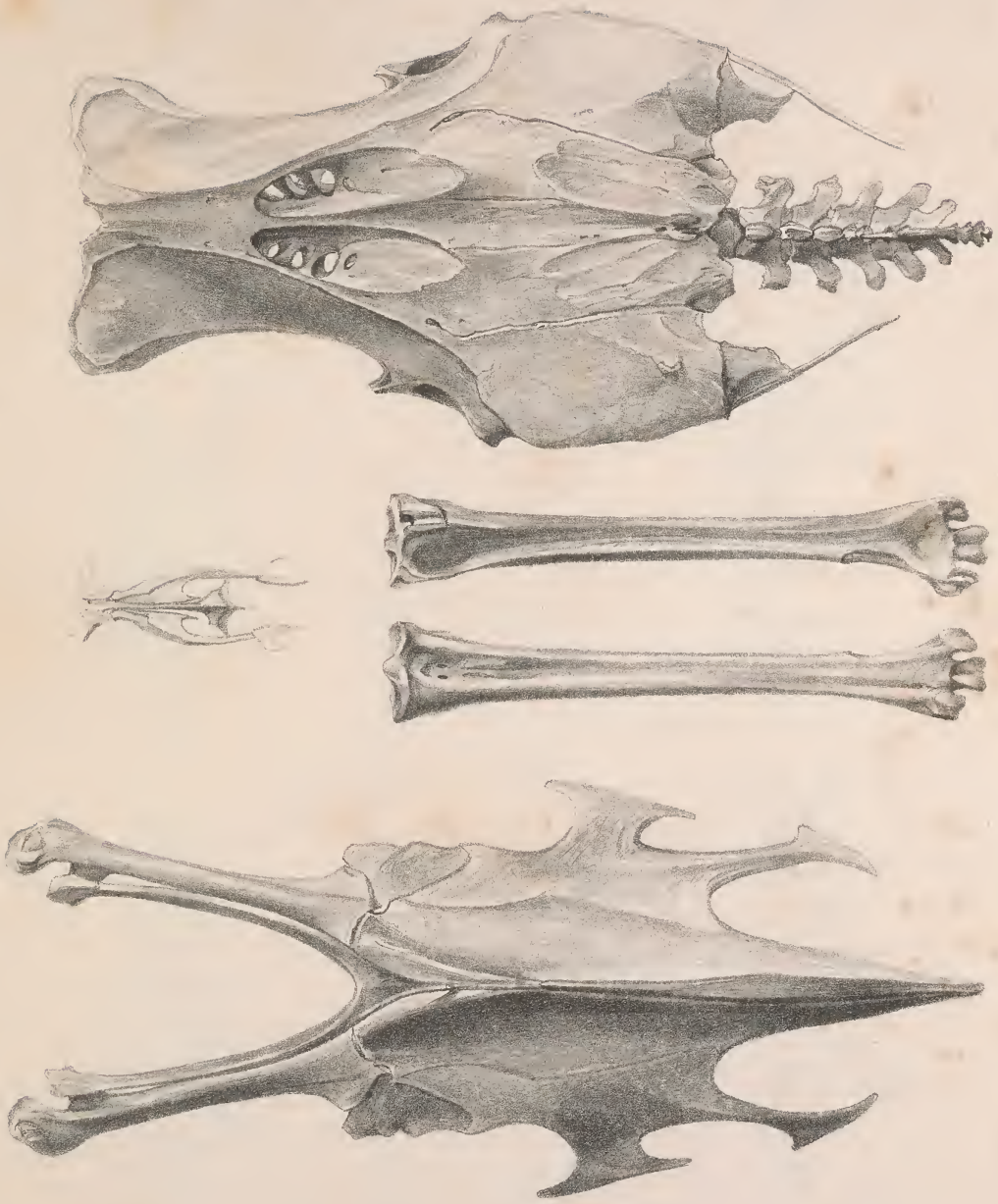


From *Natura on the* J. Erskine

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By G. S. Smith, 1872 in the *Process*

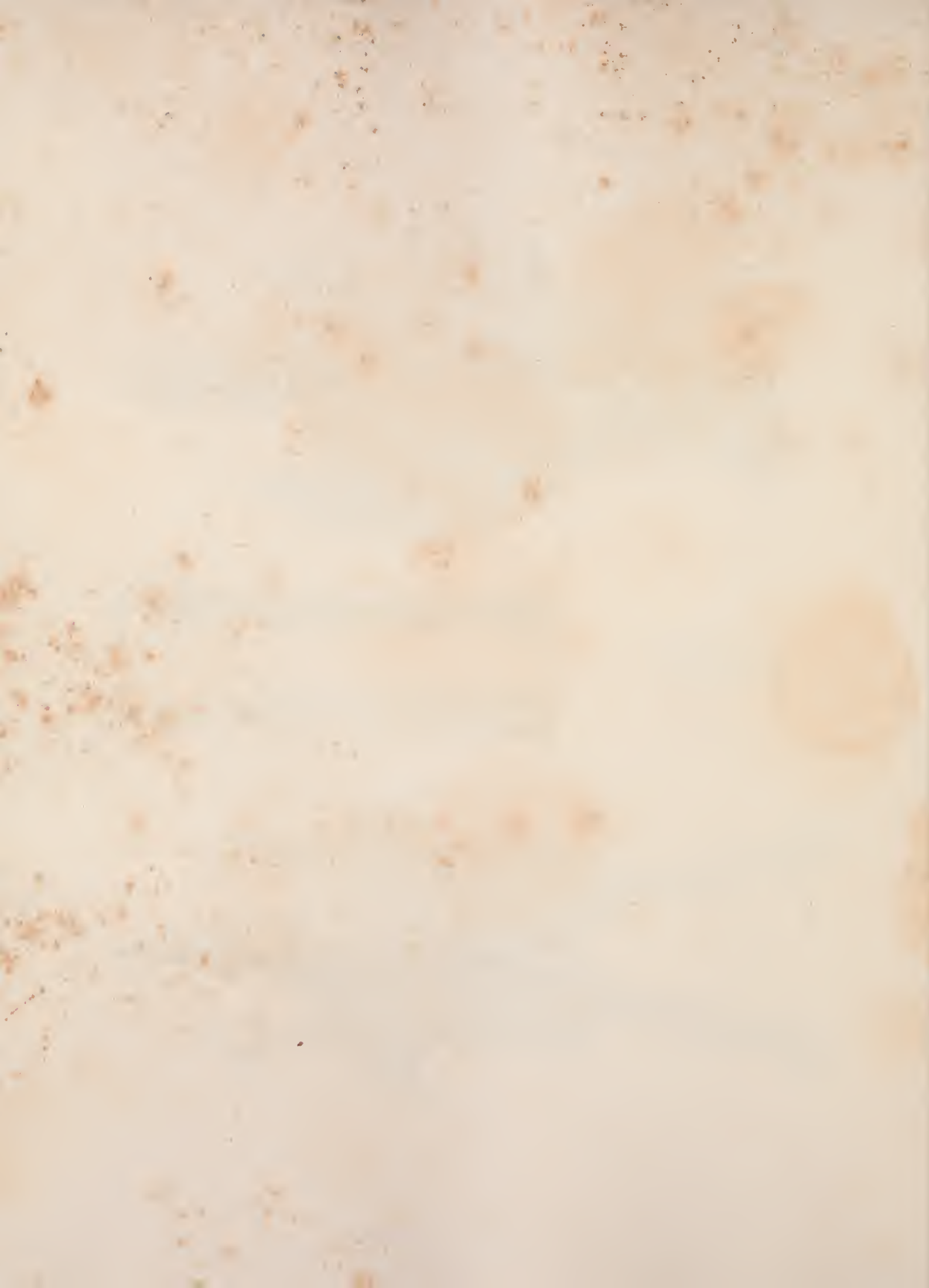
1. *Threskiornis melanocephalus*,
2. *Tantalus ibis*
3. *Aramus scolopaceus*

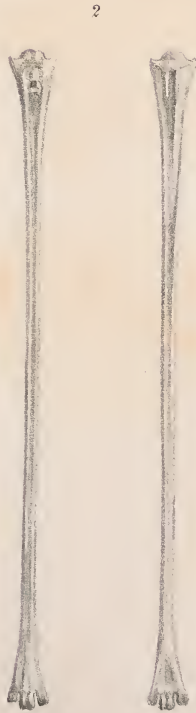


From a nature on Zinc by J. Erxleben

Deys & Son, Lith^{rs} to the Queen

OREOPHYSIS DERBYANUS.





From Nature on Zinc, by J. Erxleben

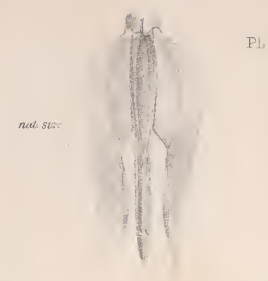
1/2 nat size

Day & Son, Litho^{rs} in the Queen

- 1 *Cariama cristata.*
- 2. *Phanicopterus ruber.*



From Nature on Zinc by J. G. Leche



nat. size

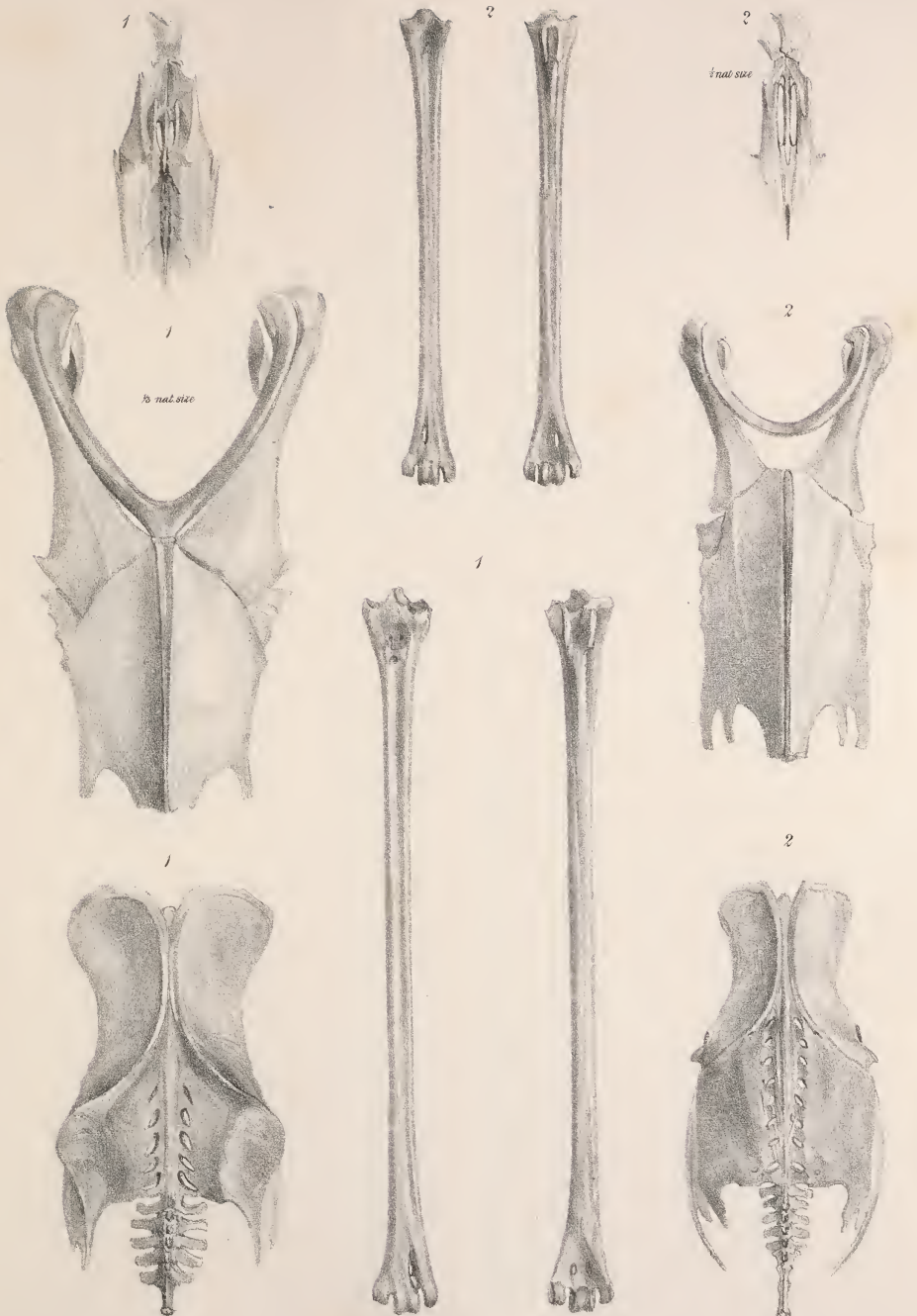


1/2 nat. size



Day & Son, Litho to the Queen

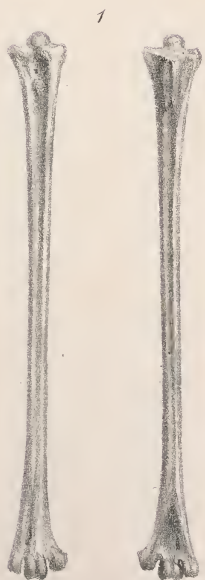
1. *Psophia viridis*
2. *Scops Balearica*



From *Nature in Line* by J. E. Sclater

Day & Son Litho to the Queen

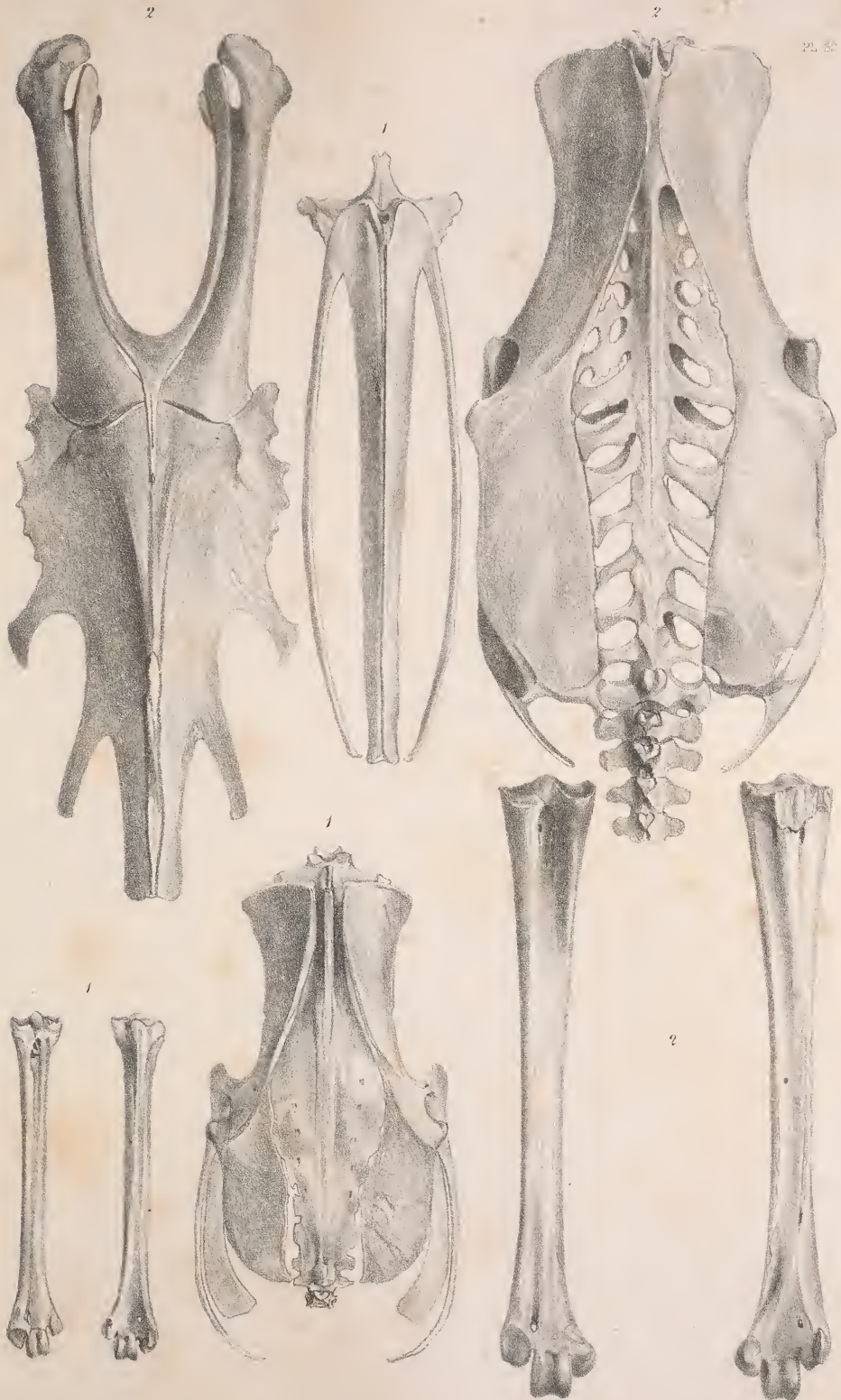
1. *Leptophilus argala*.
2. *Platylea leucorodia*



From Nature or from J. Eschschon.

Day & Son, Litho to the Queen.

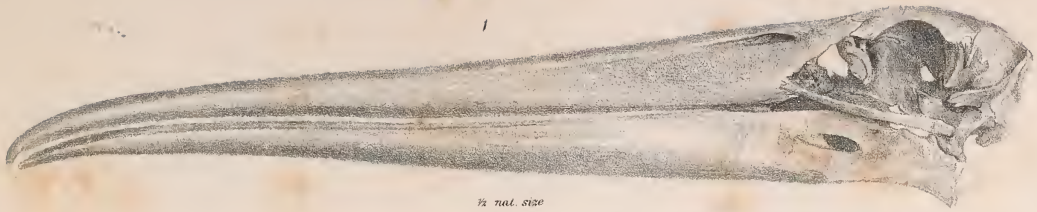
1. *Scops Virgo.*
 2. *Circaea alba.*



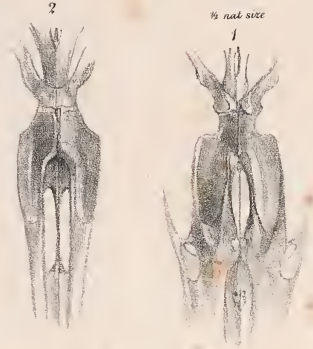
From Nature on Zinc by J. Emlen

By A. S. Smith to the Queen

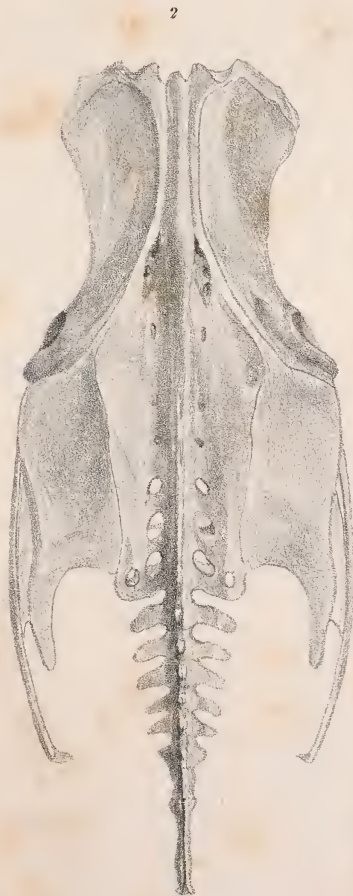
1. TINAMUS BRASILIENSIS. 2. CRAX MITU.



1/2 nat. size



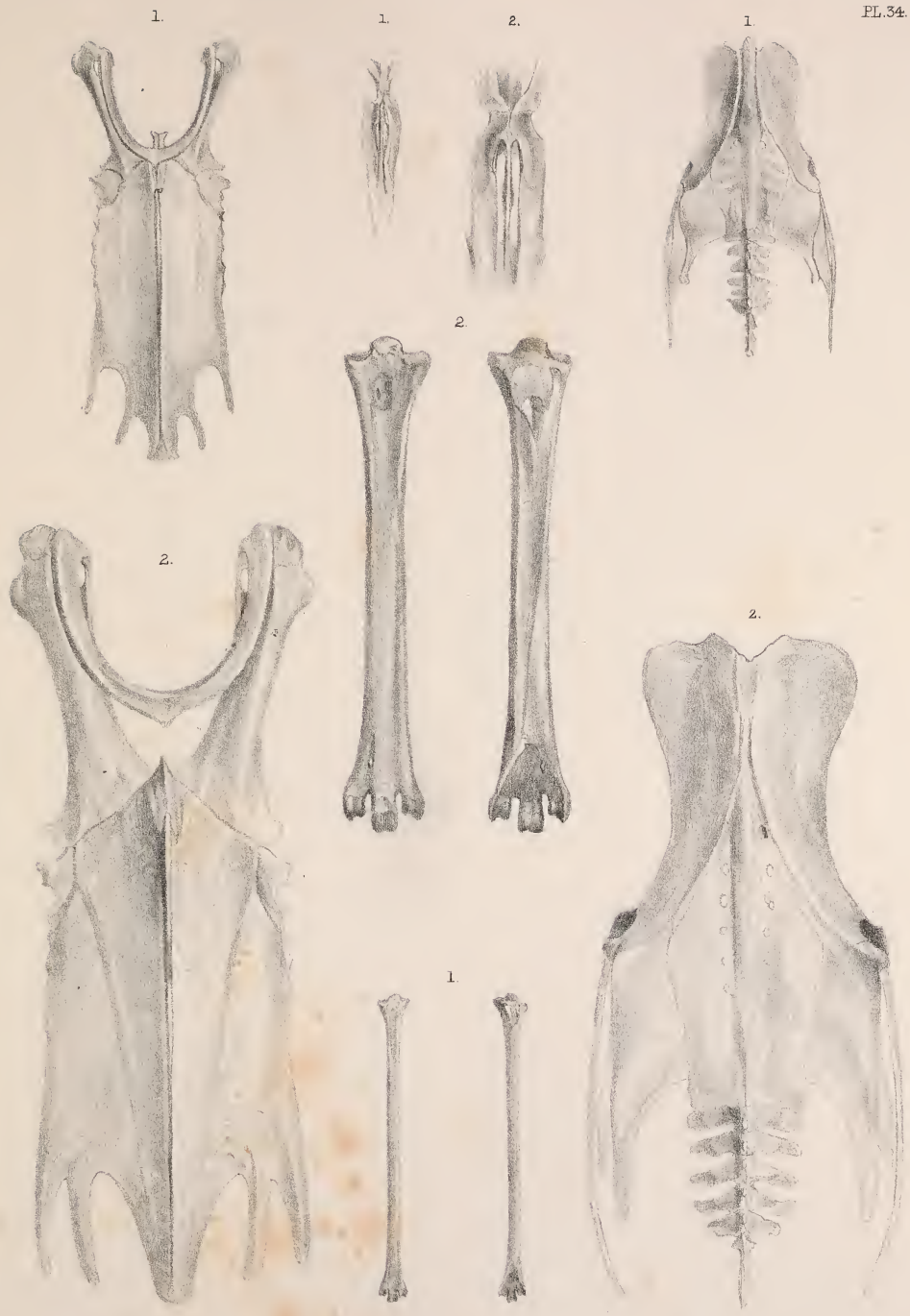
1/2 nat. size



From Nature on Zinc by J. Ericsson

Day & Son, Lith^{rs} to the Queen

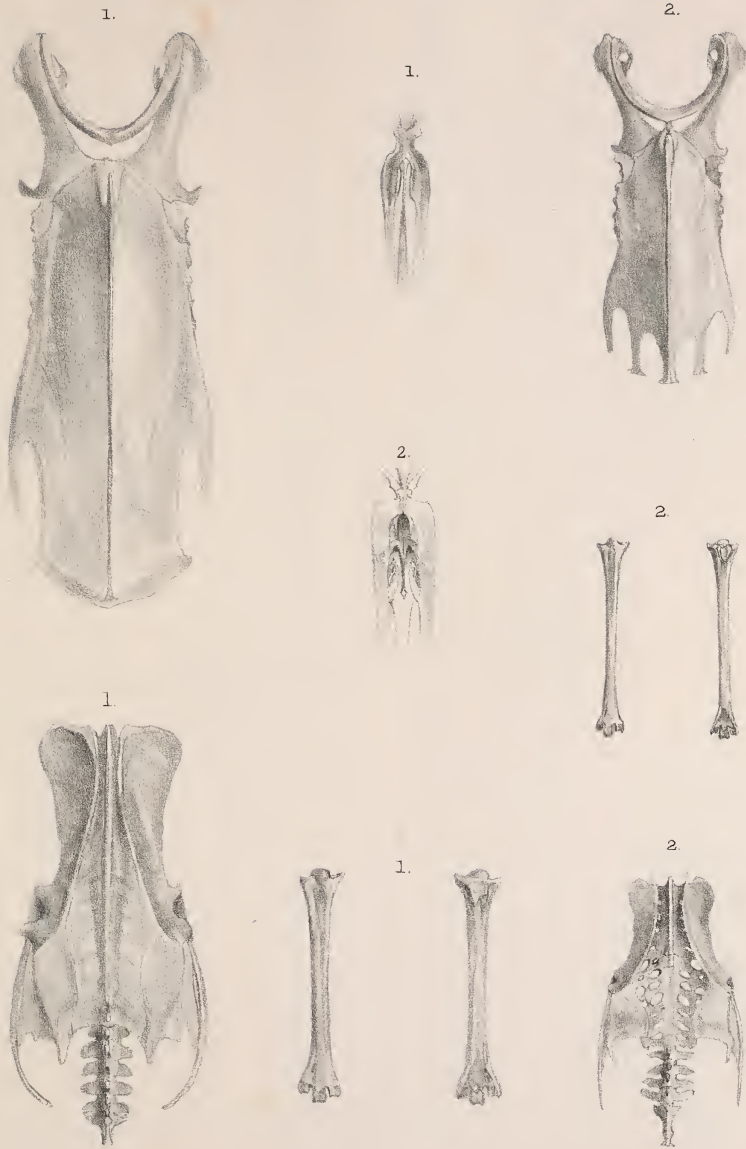
1. TANTALUS IBIS. 2. THRESKIONIS MELANOCEPHALA.

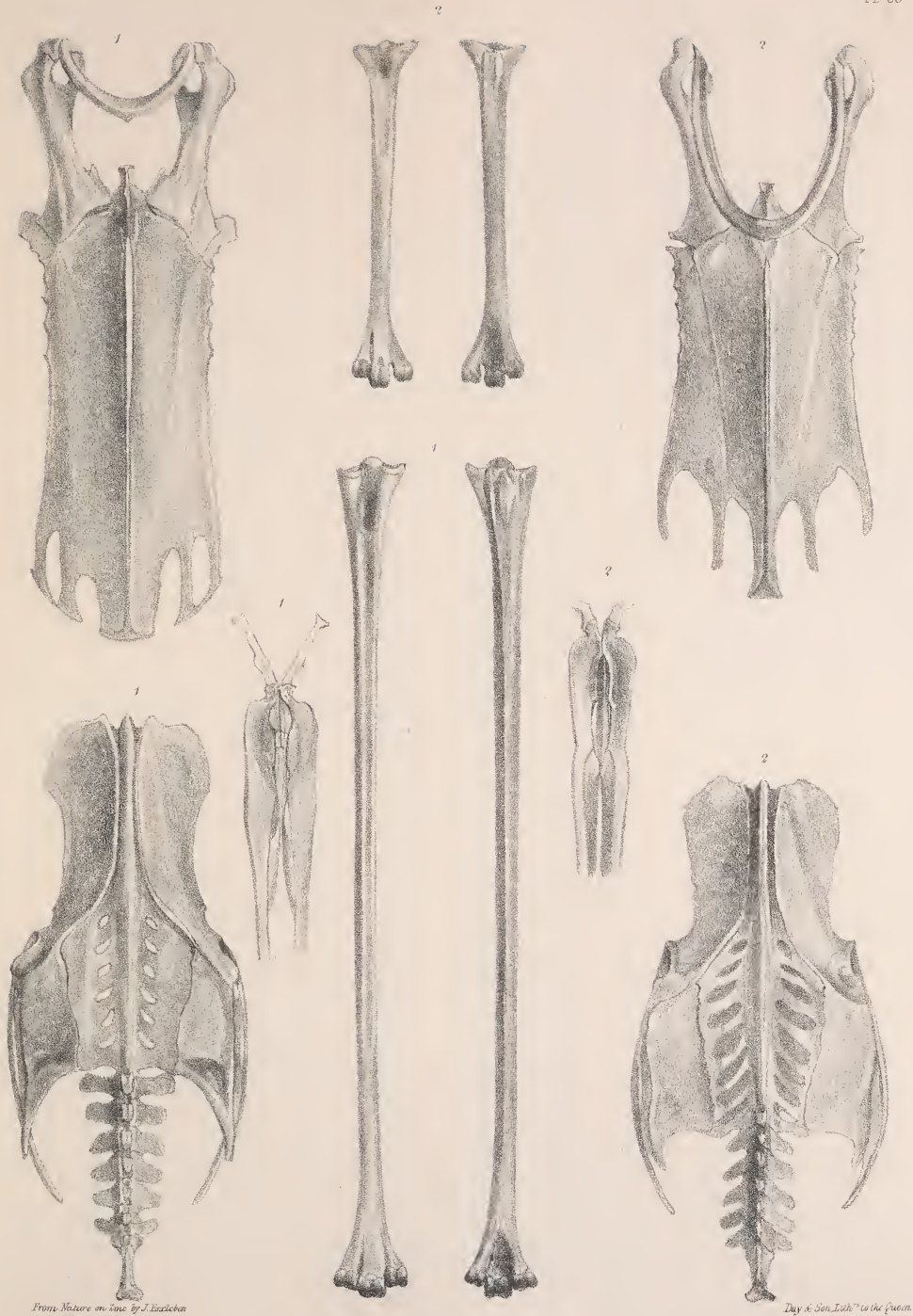


From Nature on Zinc by J. Eixleben.

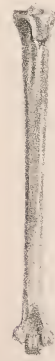
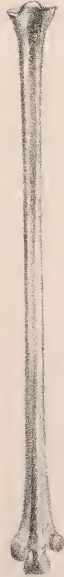
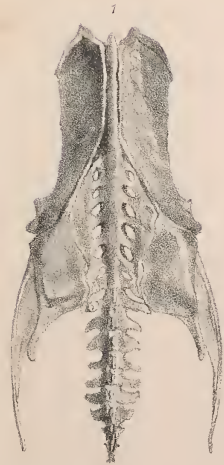
Day & Son, Lith. to the Queen.

1. TOTANUS, GLOTTIS. 2. HARPIPRION HAGABACH.





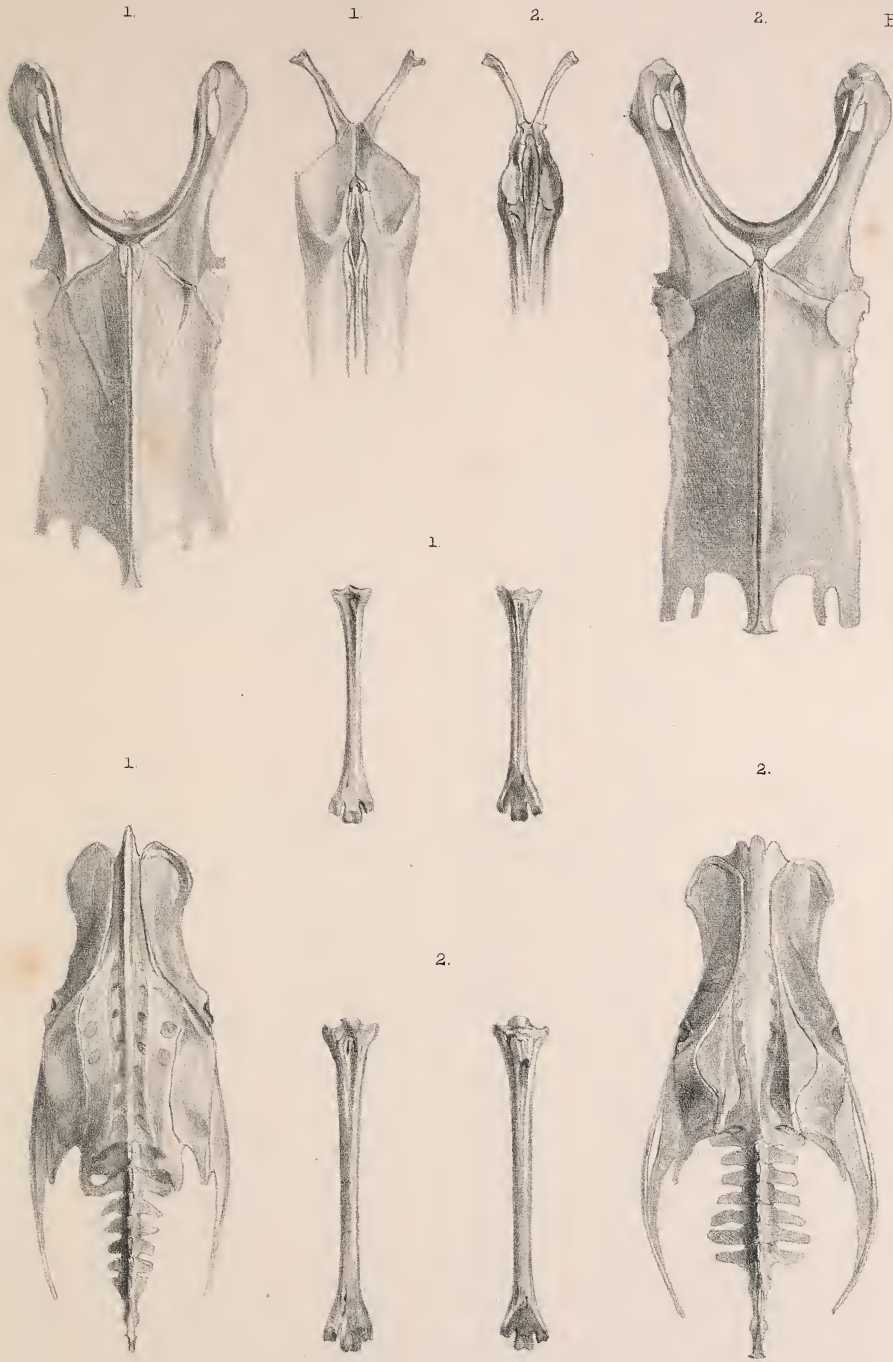
1. CEDICNEMUS LONGIROSTRIS. 2. SCOLOPAX RUSTICOLA.



From Nature on line by J.Erickson

Day & Son, 1147 1/2 to the Queen

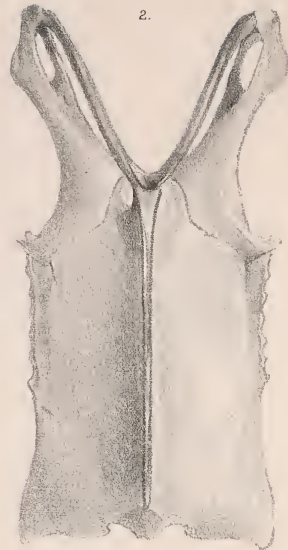
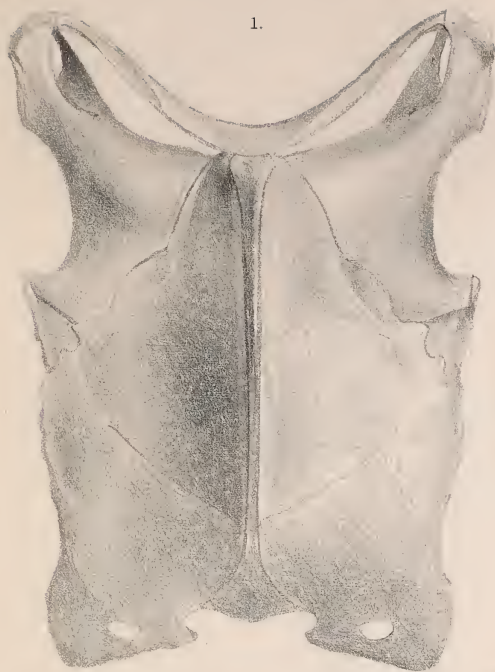
1. LIMOSA RUFÆ. 2. HELIAS PHALENOIDES.



From Nature on Zinc by J. Erastus.

Day & Son, Lith^{rs} to the Queen.

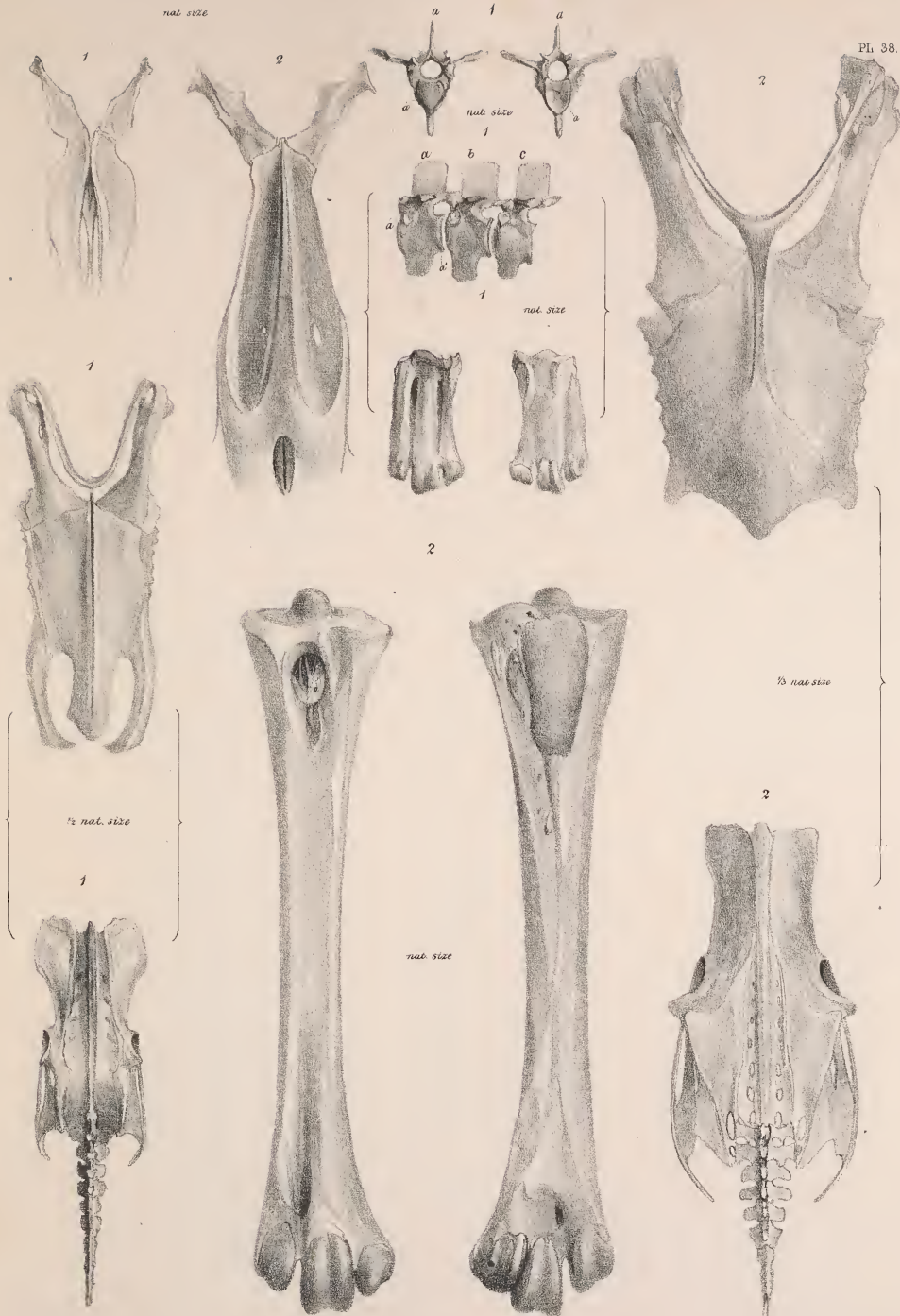
1. RHYNCOPS NIGRA. 2. CHIROICOCEPHALUS RIDIBUNDUS.



From Nature on Zinc by J. Eschsch.

Day & Son, Litho to the Queen

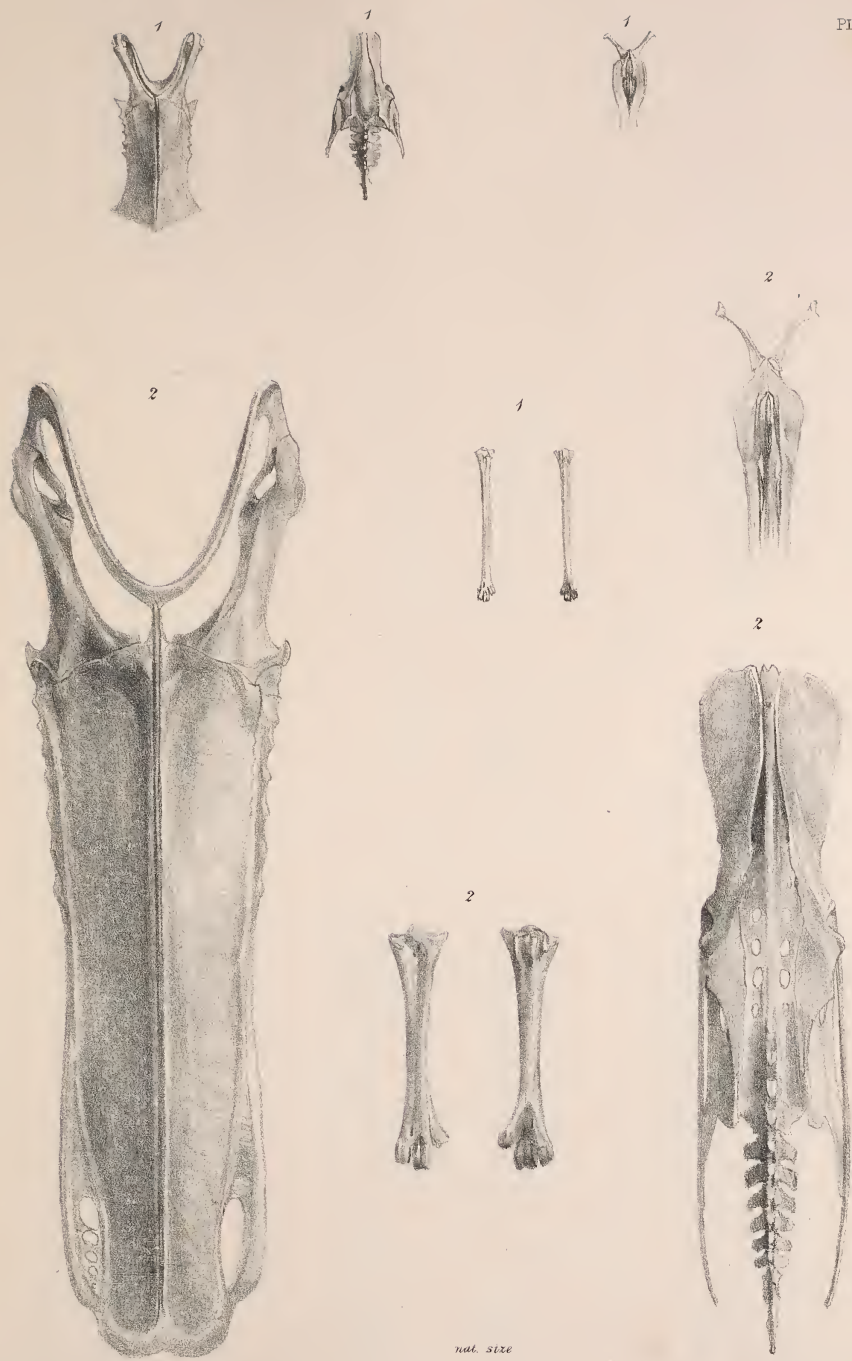
1. DIOMEDEA EXULANS. 2. PROCELLARIA GIGANTEA.



From Nature on Zinc by J. Erxleben

Drey & Sorel Lith. in the Queen

1. EUDYPTES. 2. ONOCROTALUS N. H.

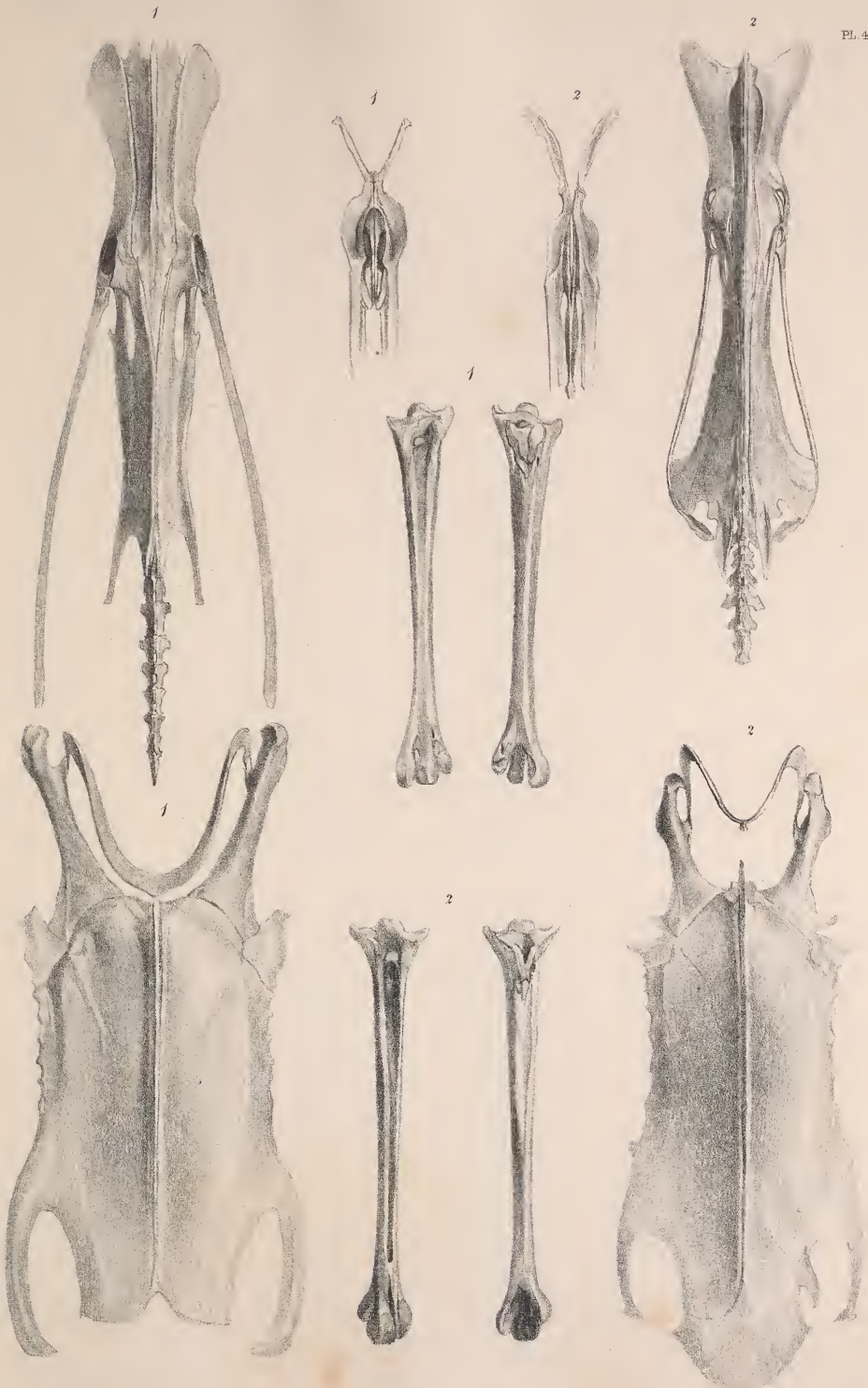


nat. size

From Nature on Zinc by J. Fraebler.

Day & Son, Lith^{rs} to the Queen.

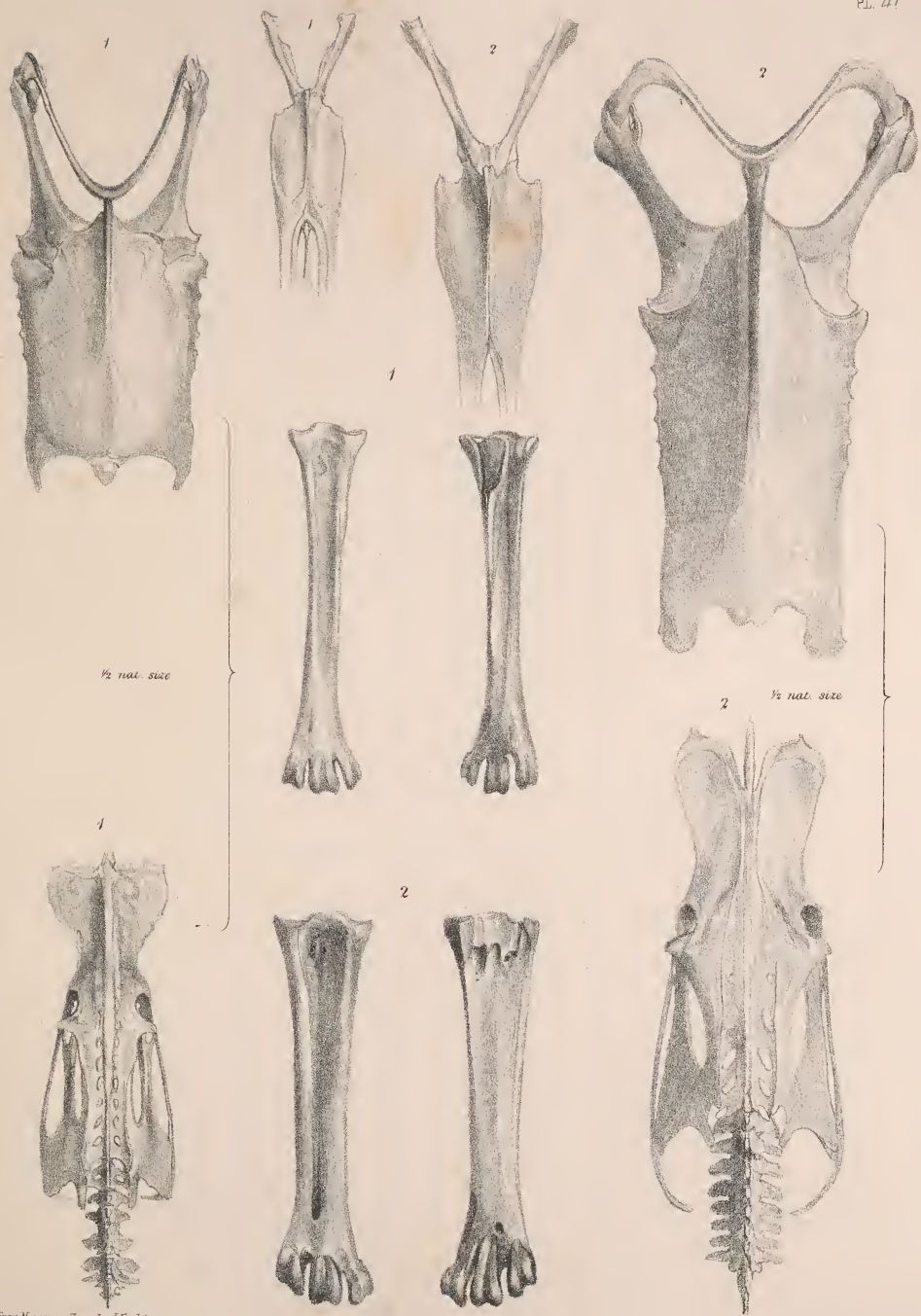
1. THALSSIDROMA. 2. URIA TROILE.



From Nature on Stone by J. Leake

Dry & Son, Litho to the proof

1. PODICEPS CRISTATUS. 2. COLYMBUS SEPTENTRIONALIS.



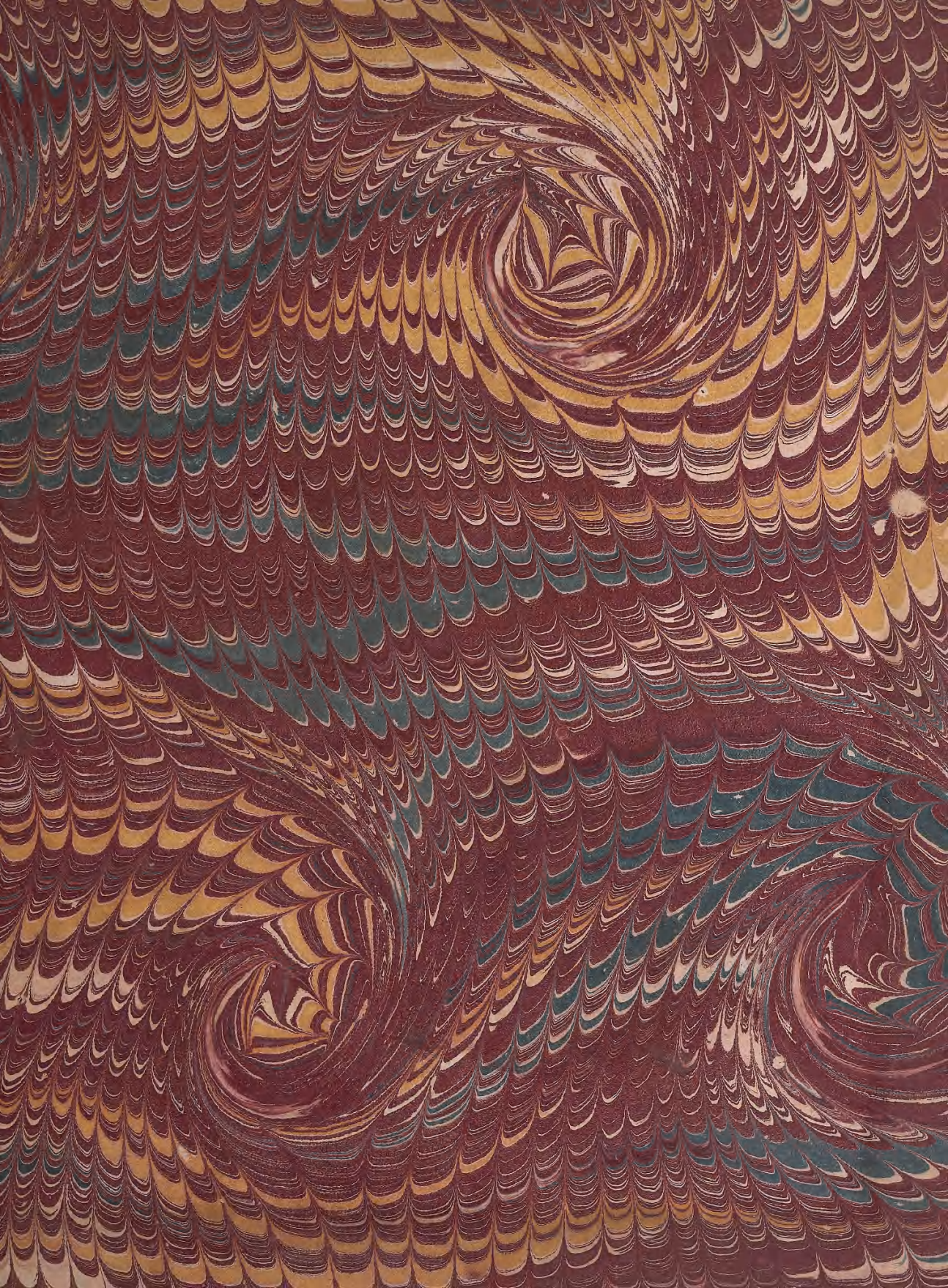
From Naumann on Zeno by J. Entlehen.

Day & Son, Litho^s to the Queen

GRACULUS CRISTATUS. 2. SULA BASSANA.

২৯/৫/১০





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