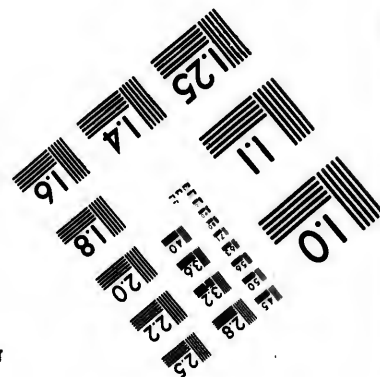
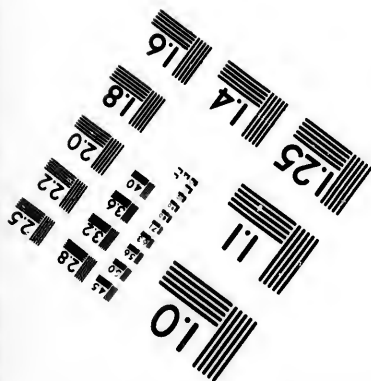
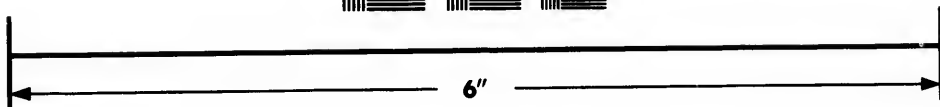
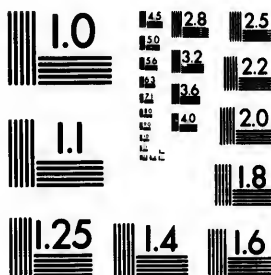


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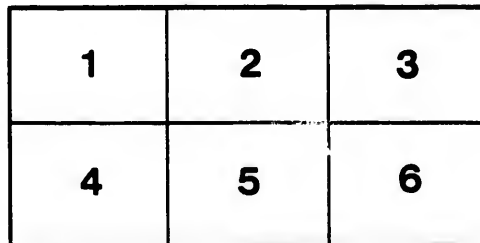
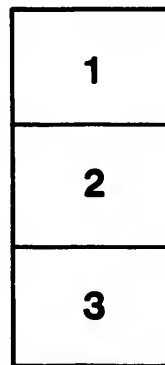
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N O R T H A M E R I C A .

C O N T A I N I N G,  
An Enumeration of the known QUADRUPEDS, BIRDS,  
REPTILES, FISH, INSECTS, Crustaceous and  
Testaceous ANIMALS; many of which are New, and  
never described before,

To which are added,  
S H O R T D I R E C T I O N S  
F O R  
C O L L E C T I N G , P R E S E R V I N G , and T R A N S P O R T I N G ,  
all Kinds of  
N A T U R A L H I S T O R Y C U R I O S I T I E S .  
By JOHN REINHOLD FORSTER, F. A. S.

---

*Non ad unam Naturam opus suum præstat; sed in ipsa  
varietate se jactat.*

SENECA, Quæst. Nat. VII. 27.

---

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M. DCC. LXXI.

CATALOGUE

OF THE

AMERICAN

OF

NORTH AMERICA

COMPARATIVE

An Enumeration of the Insects, Birds, Reptiles, Fish, Insects, and other Terrestrial Animals; many of which are new, and never described before.

To which are added

SHORT DIRECTIONS

FOR

Collecting, Preserving, and Describing

All Kinds of

NATURAL HISTORY COLLECTIONS

BY JOHN RICHMOND FORSTER, M.A.

Printed and Sold by G. G. and J. B. Smith, Stationers, No. 10, St. Paul's Church-Yard, London.

LONDON

Printed by G. G. and J. B. Smith, Stationers, No. 10, St. Paul's Church-Yard, London.

MDCCLXXXI

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*Little Falcon.*  
*Falco Sparverius, LINN.*



*M. Griffith Engr.*

*R. Murray Sc.*

---

T O  
MARMADUKE TUNSTALL, Esq.

Dear S I R,

**T**HE repeated favours *You* were so kind to bestow upon me, in the compass of a short acquaintance, and the zeal with which *You* promote the great cause of Natural History; encouraged me to prefix *Your* Name to this Publication, and give me an opportunity, thus publicly, to acknowledge the assistance *Your* benevolent and generous friendship favoured me with.

Nothing is left to me, but the simple mention of thanks; and my sincere wishes for *Your* health, happiness, and the enjoyment of every intellectual and moral blessing. I am, with the truest regard,

Dear S I R,

your most obliged,

obedient,

humble Servant,

London, April  
24, 1771.

JOHN REINHOLD FORSTER

---

## To the READER.

I Had hinted in the Preface to the third volume of *Kalm's* Travels, that I could publish but an imperfect and small catalogue of *North American* animals; and therefore declined to give it. Since that time, I have been pressed by some worthy friends to publish that catalogue, such as it is; and what is still more, I have been favoured with ample materials by a Gentleman, who is forming a collection for a Natural History of *North America*, and hopes by this to incite the inquisitive and learned resident in that country, to search, and to transmit to their friends in *England*, the productions of their several provinces. The Zoology of the first four classes of animals in *Great Britain*, has been very accurately and compleatly published; that of the country of the descendants of *Great-Britain* ought with most propriety to follow, as it interests the Mother Country most. These reasons had a great weight with me; and I offer this small catalogue merely as an essay towards forming a more compleat Natural History of that extensive continent. To instruct the Collectors, I have added to this list some short directions for the best method of preserving and transporting the various subjects of Natural History.

The Quadrupeds of this list are referred to the Synopsis of Quadrupeds of Mr. *Pennant*; the Birds, Fish, Reptiles, Insects, and Crustacea, to *Linnaeus*, *Briffon*, Mr. *Edwards*,  
and

To the READER.

and *Catesby*; some few excepted, which are referred to the *Planches enluminées*, published at *Paris*, and marked here *Pl. enl.* so as *Catesby* with a single *C.* and those which are common to *Great Britain* and *America*, to the *British Zoology*.

The Animals which have recently been discovered in *North America*, or overlooked by Mr. *Catesby*, are distinguished by *N. S.* marking a *New Species*; and by *B.* and *Mus. Bl.* The first authority is from a Collection formed by a Gentleman in his voyage to *Newfoundland*; the second, from a most select and numerous Collection of *American* Animals, belonging to a Lady in *Lancashire*.

The New Species, in the Catalogue of Birds, I had leave to insert here from Mr. *Pennant's* manuscript; and those of Insects are taken from my own manuscript descriptions of such Insects as were not described by Dr. *Linnaeus*.

The print prefixed here represents an elegant little Falcon, drawn and engraved from a fine specimen lately brought over from *North America*.

N. B. The Animals marked *E* are of European Origin; having been introduced there by the Spaniards or English, after the discovery of the *New World*: and those marked *Eur.* are originally natives of both Continents.



## CLASS I. QUADRUPEDS.

## DIV. I. HOOFED.

## SECT. I. WHOLE HOOFED.

Genus.			syn. quad.
I. HORSE	Generous	E.	N° 1
	Ass	E.	3

## SECT. II. CLOVEN HOOFED.

II. SHEEP	Common	E.	8
III. GOAT	Domestic	E.	p. 14
IV. DEER	Elk, or Moose,	Eur.	N° 35
	Rein	Eur.	36
	Stag	Eur.	38
	Virginian	N. S.	39
	Roe?		43
V. HOG	Common	E.	54

## DIV. II. DIGITATED QUADRUPEDS.

VI. DOG	Faithful	E.	N° 110
	Wolf	Eur.	111
	Fox	Eur.	112
	Arctic	Eur.	113
	Grey		114
	Silvery		115
VII. CAT	Brown		129
	Common	E.	133
	Lynx	Eur.	135
	Bay Lynx	N. S.	136
			VIII.

VIII. BEAR	Black	<i>Eur.</i>	138
	Polar		139
	Wolverene	<i>Eur.</i>	140
	Raccoon		141
IX. BADGER	American	N. S. ?	143
X. OPOSSUM	Virginian		144
XI. WEASEL	Stoat	<i>Eur.</i>	N <sup>o</sup> 151
	Pine Martin	<i>Eur.</i>	155
	Fisher	N. S.	157
	Pekan and Vison		
	Striated		166
	Skunk		167
XII. OTTER	Greater	<i>Eur.</i>	173
	Lesser	<i>Eur.</i>	174
	Sea		175
XIII. HARE	Common	<i>Eur.</i>	183
	Alpine	<i>Eur.</i>	184
	Rabbit	E.	186
XIV. BEAVER	Castor	<i>Eur.</i>	190
	Musk		191
XV. PORCUPINE	Canada		196
XVI. MARMOT	Maryland		198
	Quebec	N. S.	199
XVII. SQUIRREL	Common	<i>Eur.</i>	206
	& Hudson's Bay		
	Grey		209
	Black		210
	β Cat		
	Ground		216
	Flying	<i>Eur.</i>	221
	β hooded		
XVIII. RAT	Black	E.	226
	Brown ?		227
	Water	<i>Eur.</i>	228
	Moufe	E.	229
		A 4	Field

S.

n. quad.  
N<sup>o</sup> 1

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N<sup>o</sup> 35

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S.

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VIII.

	Field	<i>Eur.</i>	230
	Short-tailed	<i>Eur.</i>	233
XIX. MOLE	β. yellow		p. 312
	Radiated		N <sup>o</sup> 243
	Long-tailed	N. S.	244
	Brown		245
XX. WALRUS	Arctic		N <sup>o</sup> 263
XXI. SEAL	Common	<i>Eur.</i>	265
	Great	<i>Eur.</i>	266
	Rough	N. S.	267
	Hooded	N. S.	268
	Harp	N. S.	269
	Little	N. S.	270
	Urfine		271
	Leonine		272
XXII. MANATI	Manati		273
XXIII. BAT	New York	N. S.	283
	Long haired	N. S.	p. 367

## CLASS II. BIRDS.

### DIV. I. LAND BIRDS.

#### SECT. I. RAPACIOUS.

I. VULTURE.	Carrion. V. aura. 122. C. I. 6.	
II. FALCON	Bald Eagle	F. leucocephalus. C. I. 1.
	Sea	F. ossifragus. in exhibitions
	Ringtail	F. Fulvus. <i>Edw.</i> I.
	Black-bellied	N. S.
	White	<i>Du Pratz</i> , II. 75.
	Osprey	F. Haliaëtus. C. I. 2.
		Gentil

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Gentil Falcon F. gentilis Mr. B.  
Goshawk F. palumbarius. Lawson  
Ashcoloured Edw. 53.  
Sacre Mr. B. de Buffon  
Winter N. S. Mus. Bl.  
Dusky Edw. 3. 4.  
Rough-footed N. S. Mr. B.  
Chocolate N. S. do.  
Marsh Edw. 291.  
Buzzard F. Buteo. Mr. B.  
White-rump'd F. Hudsonius. Edw. 107.  
Fork-tail F. furcatus. C. I. 4.  
Pigeon F. columbarius. C. I. 3.  
Little F. sparverius. C. I. 5.

III. OWL \*  
Great Strix bubo. Edw. 60  
Short-eared Br. Zool. Mus. Bl.  
Red St. Afio C. I. 7.  
Mottled N. S. Mus. Bl.

\* \*  
Snowy St. nyctea. Edw. 61  
Barred N. S. Mus. Bl.  
Canada Br. I. 518.  
Brown Br. Zool. Mr. B.  
White ib.  
Hawk Edw. 62.  
Little Mus. Bl. Br. Zool.

IV. SHRIKE  
Cinereous. Lanius excubitor. C. app.  
Crested. L. Canadensis  
Louisiane. Pl. enl. 397.

SECT. II. PIES.

V. PARROT  
Caroline. Pittacus Carolinensis. C. I. 11.  
Illinois. Pl. pertinax. Edw. 234. Br.

VI. CROW  
Raven. Br. Zool. Mr. B.  
Carrion. B. Zool. Mus. Bl.  
Magpie Br. Zool. Edw. p. 126.  
Cinereous C. Canadensis  
Blue. C. cristatus. C. I. 15.

1.  
ons

Gentil

VII.



VII. ORIOLE	Redwing	Oriolus Phœniceus.	C. I. 13
	Baltimore	O. Baltimorus	48
	Spurious	O. Spurius	49
	Brown-headed	N. S. <i>Mr Kuckahn</i>	
VIII. GRACULE	Shining	Gracula quiscalia	C. I. 12
IX. CUCKOO	Caroline	Cuculus Americanus.	C. I. 9.
X. WOODPECKER	White-billed.	Picus principalis	C. I. 16
	Buff-checked.	P. pileatus	C. I. 17
	Gold-wing	P. auratus	18
	Scarlet	P. erythrocephalus	20
	Red-bellied	P. Carolinus	19
	Spotted	<i>Br. Zool. I. 178. Mus. Bl.</i>	
	Hairy	P. villosus	19
	Yellow-bellied	P. varius	21
	Little	P. pubescens	<i>ib.</i>
	Black	<i>Albin</i>	
	Three-toed	P. tridactylus.	<i>Edw.</i>
XI. NUTHATCH.	Greater	<i>Br. Zool.</i>	22
	Lesser		<i>ib.</i>
	Canada	<i>Br. III. 593</i>	
XII. KINGFISHER	Great	Alcedo alcyon	69
	Louisiane	<i>Pratz. II. 82</i>	
XIII. CREEPER	Bahama	Certhia flaveola	59
	Common	<i>Br. Zool. Mus. Bl.</i>	
XIV. HUMMER	Red-throated	Trochilus colubris	C. I. 65

## S E C T. III. GALLINACEOUS.

XV. TURKY	Wild	Meleagris Gallopavo.	
XVI. GROUS	Ruffed	Tetrao umbellus	<i>Edw. 248</i>
	Pinnated	T. cupido	C. III. 1.
	Long-tailed	T. Phasianellus	<i>Edw. 117</i>
	Spotted	T. Canadensis	<i>Edw. 71, III.</i>
	White	T. Lagopus	<i>Edw. 72</i>
	Partridge	T. Virginianus	C. III. 12
Quail ?	T. Mexicanus		

S E C T.

## S E C T. IV. COLUMBINE.

	<b>XVII. PIGEON</b>	Passenger	<i>Columba migratoria</i>	C. I. 23
		Caroline	<i>C. Carolinensis</i>	24
		White-crowned	<i>C. leucocephala</i>	25
		Canada	<i>C. canadensis</i>	
		Ground	<i>C. Passerina</i>	24

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		Fieldfare	<i>T. migratorius</i>	29
		Red-leg'd	<i>T. plumbeus</i>	30
		Black	<i>Br. II.</i>	245
		Little	<i>Edw. 296</i>	C. I. 31
		Golden-crowned	<i>Motacilla auro-capilla</i>	<i>Edw. 252</i>

	<b>XIX. STARE</b>	Crescent	<i>Alauda magna</i>	C. I. 33
		New York	<i>N. S. Mus. Bl.</i>	

	<b>XX. CHATTERER</b>	Prib.	<i>Ampelis garrulus.</i>	C. I. 46. <i>Edw.</i>
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	<b>XXI. GROSBEAK.</b>	Crossbill	<i>Br. Zool.</i>	<i>Edw. 303</i>
		Pine	<i>Br. Zool. IV.</i>	<i>Edw. 123, 124</i>
		Crested	<i>Loxia cardinalis</i>	C. I. 38
		Mexican	<i>L. Mexicana</i>	<i>Mus. Bl.</i>
		Roseate	<i>L. Ludoviciana</i>	
		Spotted	<i>N. S. Mus. Bl.</i>	
		Missisipi		
		Dominican	<i>L. Dominicana</i>	
		Canada	<i>L. Canadensis</i>	
		Black	<i>L. nigra</i>	C. I. 68
		Blue	<i>L. caerulea</i>	39
		Violet	<i>L. violacea</i>	40
		Fantail	<i>Pl. enl.</i>	380
		Grey	<i>Pl. enl.</i>	393
		Red-headed	<i>N. S. Mr. Kuckahn</i>	

	<b>XXII. BUNTING</b>	Snow	<i>Emberiza nivalis</i>	<i>Edw. 126</i>
		Winter	<i>E. hyemalis</i>	C. I. 36
		Rice	<i>E. oryzivora</i>	C. I. 14. <i>Edw. 291</i>
				Painted

C. I. 13  
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C. I. 12

C. I. 9.

C. I. 16  
C. I. 17  
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*uf. Bl.*  
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*ib.*

22  
*ib.*

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C. I. 65

*Edw. 248*  
III. 1.  
*Edw. 117*  
71, III.  
*Edw. 72*

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	Painted	E. Ciris C. 44	<i>Edw.</i> 130. 273	
	Louisiane	E. Ludoviciana.		
	Blue?	Br. III.		298
XXIII. TANAGRE	Blue	Tanagra cyanea		C. I. 45
	Green	Motacilla guira	<i>Edw.</i> 351.	<i>Muf. Bl.</i>
	Bishop	T. Episcopus.	Du Pratz. II.	94
	Red	T. rubra		C. I. 56
XXIV. FINCH	Towhe	Fringilla Erythrophthalma		34
	Golden	Fr. tristis		43
	Orange	Fr. zena		42
	Mountain	Fr. montana		<i>Edw.</i> 269
	Little	C. I. 35		
	Cow-pen	34		
	Bahama	Fr. bicolor	37	
	Caroline	<i>Pl. en.</i> 181.	223 ?	
	White-throated	<i>Edw.</i> 304		
	Ferruginous	<i>Edw.</i> 354.	Br. III. 296	
	Crimson head	N. S.	<i>Muf. Bl.</i>	
	Fasciated	N. S. <i>Do.</i>		
	Greater red-poll.	Br. <i>Zool.</i>	<i>Muf. Bl.</i>	
XXV. FLY-CATCHER	Tyrant	Lanius tyrannus		C. I. 55
	Fork-tail	Muscicapa tyrannus		
	Chattering	C. I. 50		
	Crested	Musc. crinita	C. I. 52	
	Black-cap	C. I. 53		
	Cinereous	Musc. virens		
	Red-eyed	M. olivacea	C. I. 54	
	Cat	M. Carolinensis	66	
	Canada	M. Canadensis		
	Blue	Motacilla sialis	C. I. 47	
	Brown	C. I. 54		
XXVI. LARK	Shore	Alauda alpestris	C. I. 32	
	Red	Br. <i>Zool</i>	<i>Edw.</i> 297	
	Calandre	<i>Edw.</i> 268		
XXVII. WAGTAIL	Redstart.	Muscicapa ruticilla.	C. I. 67	
	Yellow breast	Turdus trichas.	<i>Edw.</i> 237	
	Black throat	Motacilla Canadensis.	<i>Edw.</i> 252	
	Yellow throat.	C. I. 62.		
	Yellow rump.	<i>Edw.</i> 255		
				Red

. 273  
298  
C. I. 45  
Mus. Bl.  
z. II. 94  
C. I. 56  
na 34  
43  
42  
Edw. 269

Red poll M. petechia. Edw. 256  
Black poll  
Pine Certhia pinus. C. I. 61.  
Crowned M. coronata. Edw. 298  
Golden wing M. chrysoptera. Edw. 299  
Green Edw. 300  
Pied Edw. ib. M. varia  
Bloodyside M. Pensylvanica. Edw. 301  
Cærulean M. cærulea. Edw. 302  
Worm-eater. Edw. 305  
Yellow Br. III. 492  
Louisiane 500  
Great 508  
Quebec M. Icterocephala  
Yellow-tailed ? Edw. 257  
Spotted Edw. 257  
Cinereous Br. III. 524  
Olive Pl. enl. 58  
Ruby-crowned M. calendula. Edw. 254  
Golden-crested. Br. Zool. C. App.  
Yellow Br. Zool. II. 266. Edw.  
Wren Mus. Bl.

. 296  
C. I. 55

XXVIII. TITMOUSE

Crested Parus bicolor. C. I. 57  
Hooded C. I. 60  
Virginian P. Virginianus. C. I. 58  
American P. Americanus 64  
Canada Br. III. 553.  
Colemouse Br. Zool. Mr. B.

52  
54  
56  
47  
I. 33

XXIX. SWALLOW

House Br. Zool. Mr. B.  
Martin; ib. Mus. Bl.  
Sand ib. C. App.  
Swift ib. Lawson  
Purple Hirundo purpurea. C. I. 51  
Canada H. subis. Edw. 120  
Aculeated H. pelagica. C. III. 8

C. I. 67  
237  
Edw. 152

XXX. GOATSUCKER.

Common Br. Zool. C. I. 8  
Lesser Capr. minor. C. III. 16.

Red

DIV. II. WATER FOWL.

SECT. VI. CLOVEN-FOOTED.

XXXI. HERON.	Hooping	Ardea Americanus. C. I. 75
	Canada	A. Canadensis. Edw. 133
	Brown	A. Herodias. Edw. 136
	Common	Br. Zool. C. App.
	Violet	A. violacea. C. I. 79
	Blue	A. caerulea 76
	Cinereous	Edw. 135
	Great white	A. alba. Mus. Bl.
	Little white	A. æquinoctialis. C. I. 77
	Green	A. virens. 80
	Bittern	A. Hudsonias. Edw. 135
	Minute	Br. Zool. Mus. Bl.
	Caroline	C. I. 78
	Green head	Mr. Kuckahn
XXXII. IBIS	Wood	Tantalus loculator. C. I. 81
	Scarlet	T. ruber 84
	White	T. albus 82
	Brown	T. fuscus 83
XXXIII. CURLEW	Esquimaux	N. S. Mr. B.
XXXIV. WOODCOCK.	American	Mus. Bl.
	Snipe	Br. Zool. Mus. Bl.
	Jack	ib. Mus. Bl.
	Godwit	ib. C. App.
	Red	ib. Edw. 138
	Great	Scolopax fedoa. Edw. 137
	Nodding	N. S. Mr. B.
	Spotted	Mus. Bl.
XXXV. SAND-PIPER	Turnstone	Tringa interpres Edw. 141
	Common	Br. Zool. Mr. Kuckahn
	Spotted	ib. Edw. 270
	Cinereous	ib. Mr. B.

Knot

Knot	<i>ib.</i> Edw. 276
Redshank	<i>ib.</i> C. App.
Grey Pl.	<i>ib.</i> C. App.
Purre	<i>ib.</i> Musf. Dl.
Little	N. S.
Glossy	Mr. B. N. S.
Green	Br. Zool. Mr. Kuckahn

XXXVI. PLOVER	Green	Br. Zool. Musf. Bl.
	Pie	<i>ib.</i> C. I. 85
	Noisy	Charadrius vociferus. C. I. 71
	Golden	Ch. apricarius Edw. 140
	Lark	Br. Zool. Musf. Bl.
	Sanderling	<i>ib.</i> Musf. Bl.

XXXVII. RAIL	Clapper	Musf. Bl.
	Red-breasted	Edw. 279

XXXVIII. WATER-HEN	Caroline	Rallus Carolinus. Edw. 144.
	Common	C. I. 70.
		Br. Zool. Musf. Bl.

SECT. VII. With PINNATED FEET.

XXXIX. COOT	Common	Br. Zool. Musf. Bl.
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XL. PHALAROPE	Grey	<i>ib.</i> Edw. 308
	Red.	Edw. 142
	Brown	Edw. 46

XLI. GREBE	Eared	Edw. 96
	Pied bill	C. I. 91.

SECT. VIII. WEBBED-FOOTED.

XLII. FLAMMANT	Red	Phænicopterus ruber. C. I. 73
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XLIII. AVK	Great	Br. Zool. Edw. 147
	Razor	<i>ib.</i> Edw. 358
	Puffin	<i>ib.</i> Edw. <i>ib.</i>
	New	N. S. Br. Musf.
	Little	Br. Zool. Edw. 91
	Guillemot	<i>ib.</i> Edw. 359
	Black	<i>ib.</i>

XLIV.

C. I. 75  
Edw. 133  
Edw. 136

79

C. I. 77  
w. 135

C. I. 81  
84  
82  
83

w. 137

Edw. 141  
tabn

Knot

- XLIV. DIVER Northern  
Immer  
Speckled  
Lumme *Br. Zool. Mus. Bl.*  
*Colymbus Immer. Mus. Bl.*  
*Br. Zool. Mus. Bl.*  
*ib. Edw. 97. 146*
- XLV. CUT-WATER Black  
*Rhynchops nigra. C. I. 90*
- XLVI. TERN Noddy  
Black  
Greater  
Lesser *Sterna stolidus. C. I. 88*  
*Br. Zool. Kalm*  
*ib. Mus. Bl.*  
*ib. Mus. Bl.*
- XLVII. GULL Great  
Wagel  
Herring  
Kittiwake  
Laughing  
Black toed  
Arctic *ib. Mr. B.*  
*ib.*  
*ib.*  
*ib.*  
*ib.*  
*ib.*  
*ib. Edw. 148, 149.*
- XLVIII. PETREL Fulmar  
Shear water  
Storm *ib.*  
*ib. Edw. 359*  
*ib. Edw. 91*
- XLIX. SAW-BILL. Goosander  
Redbreasted  
Hooded  
Smew *Br. Zool. Mus. Bl.*  
*ib. Edw. 95.*  
*Mergus cucullatus. Edw. 360*  
*Br. Zool. Mus. Bl.*
- L. DUCK Swan  
Canada  
Wild, goose  
White-fronted  
Blue  
Bernacle  
Brant  
Snow  
Eider  
King  
Velvet  
Black  
Shoveler  
Golden eye  
Harlequin *ib. Edw. 150*  
*Anas Canadensis. Edw. 151*  
*Br. Zool.*  
*ib. Edw. 153*  
*A. caerulea. Edw. 152*  
*Br. Zool.*  
*ib.*  
*Anser niveus. Br. VI. Lawson*  
*Br. Zool. Edw. 98*  
*A. spectabilis. Edw. 154*  
*Br. Zool. Mus. Bl.*  
*A. perspicillata. Edw. 155*  
*Br. Zool. C. I. 96. fam.*  
*ib. Mus. Bl.*  
*A. hitrionica. C. I. 98. fam.*  
*[Edw. 99. 157.*  
*Pied*

C. Bl.

I. 90

18

Pied	A. albeola. Edw. 100
Pochard	Br. Zool. C. App.
Pin-tail	ib. Mus. Bl.
Swallow-tail	ib. Edw. 280
Buffel	A. Bucephala. C. I. 95
White-faced	A. discors. C. I. 100
Ilathera	A. Bahamensis. C. I. 93
Brown	Mr. B.
Summer	A. sponsa. Edw. 101. C. I. 97.
Widgeon	Br. Zool. Mus. Bl.
Teal	ib. Mr. B.
Blue-wing	C. I. 99.
Mallard	Br. Zool. C. App.
Scaup	ib. Mus. Bl.

LI. PELECAN

Pelecan	Edw. 93.
Corvorant	Br. Zool. Mus. Bl.
Shag	ib. C. App.
Gannet	Mr. B. Br. Zool.

CLASS III. REPTILES.

w. 36a

SECT. I. With FOUR FEET.

w. 151

I. TORTOISE	Green	Testudo Mydas	C. II.	38
	Hawkbill	T. caretta		39
	Logger-head			40
	Trunk			
	Chequered	T. Carolina.	Edw. 205	
	Mud		Edw. 287	
	Rough ?	T. scabra		
	Indented ?	T. denticulata		
	River	N. S. Dr. Garden		

152

Lawson

4

155

m.

II. FROG

Bull	Rana ocellata.	C. II.	72
Land			C. 69
Water			C. 70
			Green

B

B. fam.

157

Pied



	Green			
	Horned		<i>R. cornuta</i>	C. 71
	Striped		N. S. Mr. <i>Ellis</i>	
III. LIZARD	Allegator		<i>Lacerta Crocodylus</i> , C. II.	63
	Lion		<i>L. sex-lineata</i>	68
	Guano		<i>L. Iguana</i>	64
	Green			65
	Blue-tail		<i>L. fasciata</i>	67
	Spotted		<i>L. punctata</i>	III. 10
	Canada		N. S. Mr. <i>Ellis</i>	
	Annulated		<i>Muf. Bl.</i>	

SECT. II. With TWO FEET.

IV. SIREN	Caroline		<i>Siren Lacertina</i> , <i>Pb. Tr.</i> LVI.	189
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SECT. III. Without FEET.

V. SNAKE	†		<i>Crotalus horridus</i>	C. II. 41
	Rattle		<i>Cr. miliaris</i>	C. 4
	Lesser		<i>Cr. Durifus</i>	
	Chequered			
	††		<i>Boa contortrix</i>	C. 56
	Hog-nose			
	†††		<i>Coluber leberis</i>	
	Striped		<i>Coluber fasciatus</i>	C. 58
	Wampum		<i>C. ordinatus</i>	53
	Green		<i>C. getulus</i>	52
	Chain		<i>C. saurita</i>	50
	Ribbon		<i>C. constrictor</i>	48
	Black		<i>C. guttatus</i>	60
	Bead		<i>C. æstivus</i>	57
	Familiar		<i>C. mycterizans</i>	47
	Porraceous		<i>Coluber simus</i>	
	Crossed		<i>friatulus</i>	
	Smooth-headed		<i>punctatus</i>	
	Dotted		<i>doliatus</i>	
	Ringed		<i>fipedon</i>	
	Brown		<i>fulvius</i>	
	Yellow		<i>firtalis</i>	
	Vittated			
				Water

C. 71

C. II. 63  
68  
64  
65  
67  
III. 10

Water viper		C. 43
Black viper		44
Brown viper		45
Copper-bellied		46
Brown-bead		49
Speckled		51
Penfacola	N. S. Mr. Ellis	
Coach-whip	C. 54	
Corn	C. 55.	
little	Edw. 349	
	†	
	†††	
Glaſs	Anguis ventralis	C. II. 59
	††	
	†††	
Little Sloeworm	Cæcilia N. S. Mr. Ellis.	

Tr. LVI.  
189

## CLASS IV. FISH.

C. II. 41  
C. 4

### SECT. I. CETACEOUS.

C. 56

I. NARWHAL	Narwhal	
II. WHALE	Common	Br. Zool
	Pike-headed ?	ib.
	Fin	ib.
	Beaked	ib.
III. CACHALOT	Blunt-headed	ib.
	High-finned	ib.
IV. DOLPHIN	Porpeſſe	ib.
	Grampus	

C. 58  
53  
52  
50  
48  
60  
57  
47

### SECT. II. CARTILAGINOUS.

V. LAMPREY	Common	Br. Zool. C. App.
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Water

B 2

VI. RAY

VI. RAY	Thorn-back Sting Devil-fish	<i>C. App.</i> <i>C. App.</i> <i>C. App.</i>	
VII. SHARK	White ? Saw	<i>C. App.</i> Squalus Pristis.	<i>C. App.</i>
VIII. FISHING FROG	Common	<i>Br. Zool.</i>	<i>C. App.</i>
IX. STURGEON	European Blunt-nosed	<i>ib.</i> <i>Musf. Bl.</i>	
X. BALISTES	Unicorn Hispid Old	<i>B. monoceros.</i> <i>B. hispidus</i> <i>B. vetula.</i>	<i>C. II. 19</i> <i>C. II. 22</i>
XI. TETRODON	Smooth Globe Sun	<i>T. lævigatus</i> <i>T. lagocephalus</i> <i>Br. Zool. C. App.</i>	<i>C. II. 28</i>
XII. LUMP	Lump-fish	<i>Br. Zool.</i>	
XIII. PIPE-FISH	Shorter	<i>ib.</i>	

## SECT. III. BONY.

		● AFODAL.	
XIV. EEL	Murray Eel Conger	<i>Muræna Helena.</i> <i>Br. Zool.</i> <i>ib.</i>	<i>C. II. 20. 21</i>
XV. SWORD	Sword-fish	<i>ib.</i>	
XVI. COD	Common Froft Tau	● ● JUGULAR <i>ib.</i> <i>Gadus callarias. Musf. Bl.</i> <i>Gadus Tau.</i>	
XVII. BLENNY	pustulated	<i>N. S. Mr. B.</i>	
XVIII. REMORA	Remora	● ● ● THORACIC. <i>Ech. neucrates.</i>	<i>C. II. 26</i>
XIX. CORYPHÆNE	Parrot Blue Lineated	<i>C. Pfitacus</i> <i>C. II. 18</i> <i>C. lineata</i>	<i>C. II. 29</i>

XX. BULL-

	<b>XX. BULL-HEAD</b>	Father-lasher	<i>Br. Zool.</i>	
	<b>XXI. FLOUNDER</b>	Holibut	<i>Br. Zool.</i>	
		Flounder	<i>ib.</i>	
		Plaife	<i>ib.</i>	
		Rough	<i>Pleuronectes plagiata</i>	
		Sole	<i>Br. Zool.</i>	
		Lineated	<i>Pl. lineatus</i>	
		Lunated	<i>Pl. lunata</i>	C. II. 27
	<b>XXII. CHÆTODON</b>	Scaleless	<i>Ch. alepidotus</i>	
		Angel	<i>Ch. trioctegus</i>	C. II. 31
II. 19	<b>XXIII. GILTHEAD</b>	Lane-snapper	<i>Sparus synagris</i>	C. II. 17
II. 22		Pork-fish	<i>Sp. rhomboides</i>	C. II. 4
		Porgy	<i>Sp. chrysopt.</i>	C. II. 16
		Silver	<i>Sp. argyropt.</i>	
II. 28		Radiated	<i>Sp. radiatus.</i>	C. II. 12
		Virginian	<i>Sp. virginicus</i>	
	<b>XXIV. WRASSE</b>	Mutton	<i>Labrus anthias</i>	C. II. 25
		Mangrove	<i>L. grifeus</i>	C. II. 9
		Hog	<i>L. flavus</i>	C. II. 11
		Gaper	<i>L. hiatula</i>	
		Drum	<i>L. chromis</i>	C. App. XXXVII
		Yellow	<i>L. fulvus</i>	C. II. 10
		Cinereous	C. II. 11. <i>fig. 2</i>	
		Bone	C. II. 13	
20. 21		Great?	C. II. 15	
	<b>XXV. PERCH</b>	River?	<i>Br. Zool. C. App.</i>	
		Yellow-bellied	<i>Labrus auritus.</i>	C. II. 8
		Dotted	<i>Perca punctata</i>	
		Whiting?	<i>P. alburnus.</i>	C. II. 12
		Croker	<i>P. undulata</i>	C. II. 3.
31.		Eyed	<i>P. ocellata</i>	
		Noble	<i>P. nobilis</i>	
		Philadelphian	<i>P. Philadelphica</i>	
		Black	<i>P. atraria</i>	
		Margate	<i>P. chrysoptera</i>	C. II. 2
		Negro	<i>P. punctata</i>	C. II. 7
II. 26		Hind	<i>P. guttata</i>	C. II. 14
		Venemous	<i>P. venenosa</i>	C. II. 5
II. 29		Black-tail	<i>P. melanura</i>	C. II. 7
			B 3	Rudder

	Rudder	<i>P. festatrix</i> C. II. 8
	Striated	<i>P. striata</i>
	Grunt	<i>P. formosa</i> C. II. 6
	Trifurcated	<i>P. trifurca</i>
	Bass ?	<i>Br. Zool. C. App. XXXIII.</i>
	Apodal	C. II. 4.
XXVI. STICKLE-BACK	Crevalle	<i>Gasterosteus Carolinus</i>
	Canada	<i>G. Canadus</i>
	Skip-Jack	<i>G. Saltatrix.</i> C. II. 14
	Two-spined	<i>Muf. Bl.</i>
XXVII. MACKREL	Yellow-tail	Scomber Hippos
XXVIII. GURNARD	Flying	<i>Trigla evolans</i>
	Rough	N. S. <i>Muf. Bl.</i>

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## ABDOMINAL.

XXIX. LOCH	Beardless	<i>Cobitis heteroclitia</i>
XXX. AMIA	Mud-fish	<i>Amia calva</i>
XXXI. SILURE	Cat	<i>Silurus felis.</i> S. catus. C. II. 23
	Armed	<i>S. cataphractus.</i> C. III. 19
XXXII. TROUT	Salmon	<i>Br. Zool.</i>
	Trout	<i>Br. Zool. Mr. B.</i>
	White fish	<i>Salmo lavarettus?</i>
	Long	<i>S. foetens.</i> C. II. 2.
XXXIII. PIKE	Fox	<i>Esox vulpes.</i> C. II. 1
	Green	<i>E. Osseus.</i> C. II. 30
	Sea-needle	<i>Br. Zool</i>
	Under-jaw	<i>E. Brasiliensis.</i> Mr. B.
	Barracuda	C. II. 1
	Common	<i>Br. Zool. C. App.</i>
XXXIV. ELOFS	Forked	<i>El. Saurus</i>
XXXV. ARGENTINE	Caroline	<i>Arg. Carolina.</i> C. II. 24 *

\* Perhaps a herring.

XXXVI.

XXXVI. ATHERINE	Silver-fish	Ath. menidia
XXXVII. MULLET	White Common	Mugil albula. C. II. 6 Br. Zool. C. App.
XXXVIII. POLYNEME	Virginian	P. Virginicus
XXXIX. HERRING	Common Shad	Br. Zool. ib. C. App. XXXII
XL. CARP.	Common Roach Dace Mummy-Chog.	Br. Zool. C. App. ib. ib. ib. ib. N. S. Mus. Bl.

## CLASS V. INSECTS.

### SECT. I. BEETLES.

I. CHAFER	Scarabæus	lunaris. <i>Mus. Bl.</i>
	aloëus	
	lancifer	
	nasicornis	
	Carolinus	
	mimas	
	carnifex	
	nuchicornis	
	Marianus	
	stercorarius	
	Amazonus	
	Surinamus	
	nitidus	
	fepicola	
	horticola, a variety	
	occidentalis	
	lanigerus	
	fasciatus	
	Indus	
	brunnus	
	punctatus	

B 4

nobilis

		nobilis quadrimaculatus Hudsonias. <i>Drury</i> t. 35. f. 7 N. S. <i>Muf. Bl.</i> rufus, N. S. <i>Muf. Bl.</i> lævipes. N. S. <i>Muf. Bl.</i> piceus. N. S. <i>Muf. Bl.</i> biunguiculatus. N. S. <i>Muf. Bl.</i> pilofus. N. S. <i>Muf. Bl.</i> testaceus. N. S. <i>Muf. Bl.</i>
II. STAG-BEETLE	Lucanus	cervus capreolus interruptus — — — N. B. a brown variety
III. LEATHER-EATER	Dermestes	lardarius capucinus typographus fasciatus. N. S. <i>Muf. Bl.</i>
IV. MIMICK-BEETLE	Hister	unicolor
V. WHIRL-BEETLE	Gyrinus	Americanus
VI. CARRION-BEETLE	Silpha	vespillo. N. B. a great variety, and the small one too noveboracensis, N. S. <i>Muf. Bl.</i> bipustulata quadripustulata Americana obscura aquatica
VII. WEEVIL	Curculio	noveboracensis, N. S. <i>Muf. Bl.</i> palmarum Bacchus dispar anchoraco nucum incanus scutellatus. N. S. <i>Muf. Bl.</i>
VIII. NUT-BEETLE	Attelabus	curculionoides Pensylvanicus.

IX. LADY-

## IX. LADY-FLY

Coccinella

impunctata  
7-punctata  
13-punctata  
2-pustulata



## X. GLOW-WORM

Lampyris

Pyralis  
marginata  
pilosa. N. S. *Mus. Bl.*

## XI. SEED-BEETLE

Bruchus Pisi

*Kalm* I. 173—177

## XII. GOLDEN-HONEY-BEETLE

Chrysomela

5-punctata  
occidentalis  
Boleti  
Philadelphica  
3-maculata  
Americana  
lineola  
bicolor, variety with red thighs,  
*Mus. Bl.*

scopolina

obscura

10-maculata

12-punctata

Phellandrii

tomentosa

Rhoi. N. S. *Mus. Bl.*spenicornis. N. S. *Mus. Bl.*lepturoides. N. S. *Mus. Bl.*lineato-punctata. N. S. *Mus. Bl.*trifurcata. N. S. *Mus. Bl.*laticlavata. N. S. *Mus. Bl.*fimbriata. N. S. *Mus. Bl.*frontalis. N. S. *Mus. Bl.*Hudsonias. N. S. *Mus. Bl.*

## XIII. BLISTER-BEETLE Meloë

vesicatorius

majalis

cinerea. N. S. *Mus. Bl.*

## XIV. STINKING-BEETLE Tenebrio

chalybeus

Mauritanicus

culinaris

f. 7 N.

*Mus. Bl.*

variety

variety, and  
one too  
*Mus. Bl.*

*Mus. Bl.**Bl.*

LADY-



		culinaris folior	
XV. TORTOISE-BEETLE	Cassida	viridis bipustula ? <i>Muf. Bl.</i>	XX
		• • •	
XVI. GLOSSY-BEETLE	Cicindela	hybrida Germanica riparia	
XVII. GROUND-BEETLE	Carabus	granulatus, $\gamma$ . hortensis leucophthalmus inquisitor lividus, small variety marginatus crepitans Americanus cyanocephalus vulgaris piceus fericeus. N. S. <i>Muf. Bl.</i> fasciatus. N. S. <i>Muf. Bl.</i>	XXI
XVIII. BURN-COW	Buprestis	gigantea mariana chrysofigma Austriaca	XXV
XIX. SPRING-BEETLE	Elatér	oculatus phosporeus ligneus ? obscurus	XXV
XX. WATER-BEETLE	Dytiscus	fuscipes marginatus	XXV
XXI. SOFTWINGED-BEETLE	Malacopteryx Cantharis	Americanaus. N. S. <i>Muf. Bl.</i> tropica	XXV
XXII. WOOD-BEETLE	Leptura	mystica detrita	XXIX
		Robinia.	

XXIII. CAPRICORN-BEETLE. *Cerambyx*

- Robinia*. *Drury*. t. 41. f. 2.
- N. S. *Muf. Bl.*
- Americana*. N. S. *Muf. Bl.*
- nitens*
- imbricornis*
- coriarius*, variety
- melanopus*
- lineatus*
- spinibarbis*
- araneiformis*
- 4-maculatus*
- fuccinctus*
- suaveolens*
- Coqus*
- hispicornis*. *Drury*. t. 41. f. 4.
- rusticus*
- bajulus*
- tetrophthalmus*. N. S. *Muf. Bl.*
- brunus*. N. S. *Muf. Bl.*
- palliatu*. N. S. *Muf. Bl.*
- clavipes*. N. S. *Muf. Bl.*

XXIV. ROVE-BEETLE *Staphylinus*

- hirtus*
- erythropterus*

XXV. CLIPT-WINGED BEETLE *Necydalis*

- collaris*. N. S. *Muf. Bl.*

XXVI. EARWIG *Forficula*

- auricularia*

S E C T. II. HALFWINGED INSECTS.

XXVII. COCKROACH *Blatta*

- Americana*
- Orientalis*
- Germanica*
- livida*. N. S. *Muf. Bl.*

XXVIII. CAMELCRICKET *Mantis*

- irrorata*
- Carolina*

XXIX. LOCUST *Gryllus*

- brevicornis*
- gryllotalpa*
- campestris*

*citrifolius*

*Bl.*

*Muf. Bl.*

*Robinia*.

		citrifolius laurifolius myrtifolius? succinctus cristatus Carolinus
<b>XXX. FLEA-LOCUST</b>	<b>Cicada</b>	squamigera tibicen septendecim violacea spumaria phalznoides Lanio carinata. N. S. <i>Muf. Bl.</i> guttata. N. S. <i>Muf. Bl.</i> coccinea. N. S. <i>Muf. Bl.</i>
<b>XXXI. BOAT-FLY</b>	<b>Notonecta</b>	glauca lineata. N. S. <i>Muf. Bl.</i>
<b>XXXII. WATERSCORPION</b>	<b>Nepa</b>	grandis
<b>XXXIII. Bug</b>	<b>Cimex</b>	lecticularis. <i>Kalm.</i> bidens ictericus floridanus hæmorrhous baccarum prafinus biguttatus, variety with red dots and margs cristatus trifasciatus succinctus lacustris
<b>XXXIV. PLANTSUCKER</b>	<b>Chermes</b>	Alni. <i>Kalm</i>
<b>XXXV. COCHINEAL</b>	<b>Coccus</b>	Cacti. <i>Bartram's Florida</i>

S E C T. III. PAPILIONACEOUS. INSECTS.

XXXVI. BUTTERFLY Papilio

- Troilus. *Drury. t. 11. f. 1—5 ?*
- Ajax. *Edw. 34-*
- Xuthus. *Drury. t. 22. f. 1. 2.*
- Antilochus
- Podalirius
- Protefilaus. *Drury. t. 22. f. 34.*
- Apollo. *Muf. Bl.*
- Brassicæ
- Hyale
- Eubule
- Eclipsis
- Midamus
- Plexippus
- Misippus
- Chrysiippus
- Canthus
- Almana
- Orithya
- Cardui
- Antiopa. *Kalm.*
- urticæ
- C. album.
- Atalanta
- Euphrosyne. *Kalm.*
- Cupido
- quercus
- Echion
- Virgaureæ
- Bixæ

XXXVII. HAWK-MOTH Sphinx

- ocellata
- Populi
- Carolina
- Celerio
- Pinastris
- fuciformis.  $\beta$ . Tityus

XXXVIII. MOTH Phalæna

- Atlas
- Cecropia
- Paphia

Luna

f. Bl.  
Bl.  
f. Bl.

Bl.

with red dots

lorida

E C T. III.

Luna  
 Virgo  
 Plantaginis  
 Chrysothoea  
 lubricipeda  
 paranympa  
 Gamma  
 Pfi  
 bilineata  
 viridana  
 bella  
 pulchella

#### S E C T. IV. INSECTS with nervous Wings.

XXXIX. DRAGON- FLY	Libellula	flaveola depressa aenea umbrata Americana Carolina
XL. CAMEL-FLY	Raphidia	cornuta
XLI. SPRING-FLY	Phryganea	bicaudata
XLII. PEARL-FLY	Hemerobius	pectinicornis
XLIII. SCORPION- FLY	Panorpa	communis

#### S E C T. V. INSECTS with Stings.

XLIV. BEE	Apis	cordata mellifica rostrata violacea Carolina pratorum aestuans noveboracensis N. S. <i>Muf. Bl.</i> vespiformis. N. S. <i>Muf. Bl.</i> fericea. N. S. <i>Muf. Bl.</i>
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XLV.

XLV. ANT	Formica	herculeana rufa
XLVI. WASP	Vespa	Carolina maculosa. <i>Mus. Bl.</i> annularis quadridens Canadensis
XLVII. GOLDEN WALL-FLY		Chrysis cyanea
XLVIII. TAILED WASP	Sirex	Columba. <i>Mus. Bl.</i>
XLIX. SAW-FLY	Tenthredo	scrophularia lutea viridis
L. ICHNEUMON WASP	Sphex	fabulosa cœrulea Pennsylvanica arenaria
LI. ICHNEUMON- FLY	Ichneumon	luteus
LII. NAKED BEE	Mutilla	occidentalis

## S E C T. VI. Two-winged INSECTS.

LIII. GNAT	Culex	pipiens. <i>Musquito</i> pulicaris
LIV. WASP-FLY	Afilus	æstuans gibbosus
LV. FLOWER- BREEZE	Bombylius	minor. <i>Mus. Bl.</i>
LVI. HORSE-FLY	Hippobosca	hirundinis. <i>Mus. Bl.</i>
XLV.		LVII.

*Mus. Bl.*  
*Mus. Bl.*  
*Bl.*

XLV.

LVII. FLY      *Musca*      *illucens*. Drury, t. 44. f. 1. *M. Bl.*  
*leucopa*  
*vomitorea*  
*carnaria*  
*domestica*

LVIII. WHAME      *Tabanus*      *Americanus*. N. S. *Muf. Bl.*

LIX. GADFLY      *Oestrus*      *Tarandi*

### SECTION VII. INSECTS without Wings

LX. SUGAR MITE      *Lepisma*      *saccharina*

LXI. GROUND-  
FLEA      *Podura*      *aquatica*

LXII. DEATH-  
WATCH      *Termes*      *pulfatorium*

LXIII. LOUSE      *Pediculus*      *humanus*  
*ricinoides*  
*fuis*  
*cervi*  
*meleagridis*

LXIV. FLEA      *Pulex*      *irritans*  
*penetrans*. *Chigger*

LXV. TICK      *Acarus*      *Americanus*  
*Siro*  
*holosericeus*

LXVI. LONG-  
LEGGED SPIDER      *Phalangium*      *groffipes*  
*opilio*  
*acaroides*  
*balænarum*  
*reniforme*

LXVII. SPIDER      *Aranea*      *diadema*  
*clavipes*  
*venatoria*

LXVIII. SCOR-  
PION      *Scorpio*      *Americanus*  
*australis*. *Muf. Bl.*

- LXIX. CRABFISH.** sentry  
 minute  
 land  
 florid  
 Sand  
 common  
 roughshelled  
 spider  
 dotted  
 rock  
 redclawed
- LXX. LOBSTER** common  
 cynic  
 Soldier  
 Cray
- LXXI. MONOCULE** King's Crab
- LXXII. MILLEPEE** Oniscus
- LXXIII. CENTIPEE** Scolopendra
- LXXIV. GALLYWORM** Julius
- Cancer pinnophylax  
 C. minutus, *Kalm.*  
 C. ruficola, *Cat. II.*  
 C. floridus  
 C. vocans, *Cat. II. 35.*  
 C. mænas, *Mr. B.*  
 C. granulatus, *Cat. II. 36. N° 2.*  
 C. araneus, *Mr. B.*  
 C. punctatus  
 C. Grapsus, *Cat. II. 36. N° 1.*  
*Cat. II. 37. f. 1.*
- Cancer Gammarus  
 C. Diogenes, *Cat. II. 33. f. 1. 2.*  
*Cat. II. 34.*  
 C. carcinus
- Monoculus Polyphemus, *Mus. Bl.*
- Oestrum, *Mus. Bl.*  
 Physodes, *Mus. Bl.*  
 Ceti  
 Afellus
- forficata  
 morfitans, *Cat. II. 2.*  
 occidentalis  
 marina
- crassus

C

TESTA-



# TESTACEOUS.

REFERENCES to American Shells, engraved in Lister's  
Hist. Conch.

<b>LAND</b>	N <sup>o</sup> 19	Sea Bivalves. N <sup>o</sup> 34.	279
	45		196. 358
	69		200. 434
	82		277. 436
	91	Sea turbinated.	855. a. 12
	92		1058.—10
	93		1059—2
	94		4
<b>RIVER TURBINATED</b>	3	River Bivalve	5
	4		6
	5		9
	6		10
	7		15
	8		
	35		
	44		
45			
46			

SHORT

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SHORT DIRECTIONS

FOR LOVERS and PROMOTERS of

NATURAL HISTORY,

In what manner Specimens of all Kinds may be collected, preserved, and transported to distant Countries.

I. **A**LL Quadrupeds of a great bulk must be skinned as soon as possible after death, the tail, claws, teeth, horns, ears, bristles on the nose and chin, are carefully to be preserved; the hair of the fur as little stained with blood as possible; the opening is to be as small as it can conveniently be without hindering the operation; the inside of the skin may then be washed or brushed over with a liquor, made of an ounce of Sal Ammoniac, dissolved in a quart of water, in which afterwards two ounces of corrosive sublimate Mercury must be put: or four ounces of Arsenic may be boiled in two quarts, or two quarts and a half of water, till all or the greater part of it be dissolved, and the liquor may serve for the same purpose to wash the inside of the skin: then the whole cavity must be stuffed with oakum or tow, likewise saturated with the above liquor, afterwards dried and mixed

C 2

with

Lister's

34. 279  
96. 358  
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1059—2  
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with a powder of four parts of Tobacco-sand, four parts of pounded black Pepper, one part of burnt Alum, and one part of corrosive Sublimate or Arsenic: lastly, the whole is to be sewed with a thread dipt in the above liquor, and the skin thus stuffed must be gently dried, and a day after put into an oven, whose heat must be so gentle, that a hair, or a feather put for trial's sake into it, will not crisp, or curl, or bend; and thus it will be perfectly dried: the eyes may be filled up with putty, which, when dry, will look like the white part of an eye, and will bear painting, to express with oil-colours the iris and pupil of the natural eye of the animal in question. The whole animal must be put into a box, filled with tow or moss, or oakum steeped in the above liquor, and perfectly dried. The box must be brushed over on both sides with the above liquor, and dried; and the crevices shut up with pieces of paper pasted over; the paste must be made either with the arsenical liquor, or that made with corrosive sublimate instead of common water; and I can assure these precautions, though cheap and simple, will keep the animal in the best preservation on the longest voyages, and for many years in a collection. This way of preparing and securing the boxes for sending specimens abroad, the prepared oakum or tow, the powder and liquor mentioned above, are always to be understood when I afterwards speak of prepared boxes, prepared tow, moss, or oakum, and preparing powder or liquor.

II. Small Quadrupeds may be plunged into a keg of brandy, rack or rum, and thus sent over: observe however to put them first into the coarser kind of spirits; and after they have been therein for a while, and parted with some impurities, you must put them into another vessel with new clean rum or brandy, into which some alum may be put; and they will keep thus better, and be less subject to change or decay.

III. Birds must be opened at the vent, their entrails, lungs,

lungs, and craws taken out, washed with the above preparing liquor, strewed with the preparing powder, stuffed with the prepared oakum or tow; their plumage kept clean during the operation, sewed up with thread steeped in the preparing liquor; the eyes taken out, with the tongue, and both places washed with the same liquor; the mouth must be filled with prepared tow in great birds; the eyes filled up with putty, and, when dry, painted with oil-colour after the natural colour of live birds of the same species, and then dried in an oven: however, as there is all the meat on the bird left, care must be taken not to take too plump or too fat birds, and dry them slowly under the same precaution as mentioned N° I. The operation must be repeated till the bird be perfectly dry. The attitude may be given to the bird before he be put into the oven, by wires that are sharp on one end, and thrust through the bird's legs, body, breast, and neck, and others going through the wings and body. Small birds are likewise well preserved in brandy, rack, or rum; and when arrived at the place of their destination, they must be washed and sweetened in fresh water for several times, and lastly dipped in the preparing liquor, the plumage laid in order, the attitude given to the bird by wires, and then dried. Care must be taken to kill the birds with shot proportioned to their size, and at a reasonable distance, that the specimen may not be mangled and torn. Young birds which have not yet moulted, must not be taken, but old birds in full feather, and, if possible, a specimen of each sex; for the sexes often vary very much in size, feather, and colour. The nests of birds and their eggs would likewise contribute towards perfecting the history of this branch of zoology.

IV. All kinds of Reptiles, as snakes, lizards, and frogs, and small tortoises, must be put into brandy or rum with alum in it: observe not to take such snakes or lizards as have accidentally lost their tails: the scales of these animals must be carefully preserved.

V. Fish

V. Fish of all denominations will likewise bear sending in bottles or kegs with brandy or rum. The fins, and tails of the fish, their scales, and in some kinds, the beards, or other small characteristic appendages, must not be rubbed, torn, or destroyed.

VI. Insects may be caught in a pair of forceps covered with fine green or white gauze, which for better security may be sewed over either with silk or thread. The collector must have a pincushion, with three or four different sizes of pins, calculated for the different sizes of the insects; one or two chip-boxes lined on top and bottom with cork, all steeped in the preparing liquor; one or more larger store-boxes at home to put therein the insects caught in the various excursions; a large Muscheto gauze-net made in the shape of a bat fowling-net, which is to be got ready made in London; and a thread net with small meshes on a round wire hoop fixed to a long pole, in order thus to catch insects that live in water. With these instruments all insects may easily be caught. The beetles must have the pin run through one of their wing-shells; the half-winged insects through the thorax, and so likewise must be done to butterflies, hawk-moths, and moths, to the insects with four and two membranaceous wings, and some of the insects without wings. As the papilionaceous insects very frequently beat their wings, and thus rub off the fine scales covering them, it is necessary to give these creatures, when in the forceps or net, a gentle squeeze at the insertion of the wings in the body, and to put them, when returned home from an excursion, on a large pincushion, by which means they will be enabled to rest their feet on, and this will prevent their fluttering. Beetles, and many of the half-winged insects, may be dipped in the preparing liquor, which will kill and put them soon out of pain and prevent small insects from destroying them. The greater part of beetles may with as great propriety be plunged into a  
bottle,

bottle, with rum or rack, and thus sent over. This can likewise be done with all marine insects; small crabs, millepees, centipees, spiders, gally-worms, scorpions, &c. and many curious grubs or caterpillars, which are the first state which beetles and butterflies, moths, &c. live in. To each insect, not in spirits, put a small paper, on which is marked the time of the year it is caught in, the plant or food it lives upon, its changes, and what animals feast again upon the insect, and other such particularities.

VII. The shells, both those found in fresh water-lakes, ponds, and rivers, and those that live only in the ocean, must not be chosen among those that lie on the shores of the sea and fresh waters, and have been broken and injured, or rolled by the waves and exposed to the air and sun and thus calcined; but rather as fresh as possible, and with the animal in it: one or two specimens of which may be preserved in Spirits: from the rest extract the animal, and keep the shell, when perfectly dry and sweet, packed up in cotton, tow, or moss. The same is to be done with the echini or sea-eggs, and other crustaceous animals; especially be careful to preserve their curious spines.

VIII. The harder and stone-like animal productions of the sea, comprehended under the names of Madrepores, Millepores, Cellepores, Corals, and Gorgonias, are either without its inhabitants, and then they want no other care but a good packing in cotton or tow; or the animal is still alive, and then it would be necessary to put the specimen in a flat vessel filled with Sea-water, and to watch the moment when the animal puts out its arms or branches, and then to pour instantly a good quantity of strong spirit into the water, so that the acid of the liquor may prevent the animal from drawing in its branches or arms: after this, the animal may be put

put into another glass, with new rum poured on it; the glass must be well corked, and covered with putty and a bladder. All the alcyoniums, sponges, hornwracks; pipe-corals, coralines, sea-feathers, and other curious zoophytes, must be treated in the same manner; as this would be a means to acquaint us with the various inhabitants of this curious tribe of marine productions.

IX. The various worm-like animals comprehended under the name of *Mollusca*, may be best preserved in rum or brandy: only observe to pour the rum on them, when they are putting out their arms, eyes, horns, tentacula, and other parts of their frame.

X. To the quadrupeds, birds, reptiles, fish, and in general to all the specimens, must be fixed lead tickets by means of a wire; and a number on the lead scratched in; which must be referred to, in a paper, where under the same number the collector would be pleased to write the name by which the animal goes in his country, or among the various tribes of Indian nations; with the food, age, growth, nature, manners, haunts, how many young or eggs it brings forth, in what manner it is caught, what it is used for, &c. &c.

XI. The vegetable world affords such an immense variety of productions of so great and varied uses for the various purposes and wants of human society; that it would be rather blameable in men to be indolent in respect to them. Old England can justly glory in being possessed of the greatest variety of plants of all kinds; but even these glorious and spirited efforts in this branch of knowledge, are not yet sufficient to make us acquainted with all the productions of the vegetable kingdom, and their various uses. Besides this, their cultivation at large is often impossible in our cold climate, and reserved for a more mild and happy one, beyond



beyond the Atlantic: nothing is therefore more necessary than to facilitate the transportation of seeds and plants into distant countries in a state of vegetation. The ingenious and great promoter of natural history, John Ellis, Esq; has favoured the world with a curious pamphlet, containing the best directions for that purpose; it would be therefore superfluous to repeat what he has already said, were it not necessary to make my performance more compleat, by inserting a few hints abstracted from his useful publication; and adding to it some remarks of my own.

Seeds of all kinds, intended to be sent abroad, must be collected perfectly ripe in dry weather, and kept dry without exposing them to sunshine. Hard nuts, and leguminous seeds; may be plunged for a moment in the preparing liquor and then dried again, as this would prevent insects from attacking them. In general must the seeds be previously examined, and care taken that no insects may be sent with them; this can sometimes be discovered by the naked eye, sometimes by a magnifying glass; and by a little brown or black spot on the outside of the seed; such ripe and chosen seeds, if of a good size, each of them may be wrapped in a flat piece of bees-wax; if small or quite minute, many may be put together in such a piece of bees-wax, or, what is still better, in a piece of cerate paper, i. e. paper steeped in melted bees-wax; and all these parcels must be put in a pot or box, proportionate to the quantity of seeds you have, filled with melted wax, to the height of about the size of the seeds you are to send, or the parcels you have made; and when the wax is pretty cool, but still soft, lay your seeds or parcels in rows in the soft wax, and then fill again some melted wax in, and proceed to lay seeds in the same manner till your pot or box be full. Pulpy seeds, as those of strawberries, mulberries, arbutus's,



may be squeezed together, pressing out the watery particles, drying these small cakes, and then putting them in the abovementioned cerate paper. Or small seeds mixed with dry sand, and put in cerate paper, packed in proportionate glasses, and covered with a bladder or leather, and all such glasses again packed in a vessel, filled with a mixture, consisting of half culinary salt, the other half of two parts of saltpetre, and one part of sal ammoniac, will keep the seeds cool, and preserve their vegetative power.

Plants or shrubs that are to be transported, must be taken out with a lump of soil covering the roots, which must be wrapped in wet moss, surrounded with paper or a Russian bast-mat and packthread; plants thus packed may be put in a chest or box upon a layer of three inches deep wet moss in close rows, filling up all vacancies with moss. Some holes or slips in the lid of the box, covered with bast-mats or sail-cloth, will give them air, and a direction must be fixed on top, to keep the lid uppermost, and the box in an open but shady airy place, out of the spray of the sea: the same caution, in regard to air and sea, must be taken with the boxes containing seeds.

XII. Minerals, fossils, and petrefactions of all kinds, ought to be wrapt separately in papers, and the whole collection packed in hay, tow, hemp, or cotton, in a box, so that none of the specimens may touch or rub one another when the box is transported by land-carriage, or shaken by the rolling of the sea. Clays, earths, sands, and salts, are best preserved in glasses, or little glazed gally-pots covered with a bladder. Mineral waters may be safely filled in glass bottles, immediately after corked up and pitched, or covered with putty round the cork.

XIII.

XIII. Though antiquities are no ways in connection with Natural History, it will however, be very acceptable, if the curious of North America will collect and communicate to their friends in Great Britain, all the inscriptions, arms, vases, utensils, idols, and other things, found in that continent, capable of throwing a light on the history and antiquities of its first inhabitants.

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XIII.

