THE POET GRAY AS A NATURALIST
THE POET GRAY
AS A NATURALIST

"The unique distinction may be claimed for Gray," says Mr. Lowell in his delightful essay on the poet, "that he is the English poet who has written less and pleased more than any other." The slenderness of his poetic product, and several expressions in his letters concerning his indolence and his ennui from want of occupation have tended to create an impression of him as an intellectual idler and voluptuary whose idea of "paradisaical pleasures" was to read eternal new romances of Marmiveux and Crébillon, and whose sovereign anodyne was Fastidium. There could hardly be a more mistaken impression. It is true that he wrote no poetry of consequence after he was forty years old. The stream of his inspiration, which up to that time had been intermittent, but had occasionally gathered head enough to set in motion the wheel of expression, after this period ceased to flow in the channels of poetry.

He regretted his own sluggishness and indisposition to write; but the effort to overcome it was beyond his power. In 1758, when he was forty-two years old, he wrote to his friend Mason, "I cannot brag of my spirits, my situation, my employments, or my fertility; the days and the nights pass, and I am never nearer to anything but that one to which we are all tending;
yet I love people that leave some traces of their journey behind them." And again in the same letter, "If I were to coin my whole mind into phrases, they would profit you nothing, nor fill a moderate page." Ten years later he wrote to Horace Walpole, who had urged him to compose more poetry, "Till four-score and ten, whenever the humour takes me, I will write, because I like it, and because I like myself better when I do so. If I do not write much, it is because I cannot." And to his friend Wharton he excused his unproductiveness, saying, "I by no means pretend to inspiration, but yet I affirm that the faculty in question is by no means voluntary. It is the result, I suppose, of a certain disposition of mind which does not depend on one's self, and which I have not felt this long time."

Thus, with no strong impulse or special motive for expression, with no professional occupation and no liking for general society, Gray resorted to books and to the study of nature, and found in them employment which suited his temperament, afforded to him the mild happiness which turned his occupations to pleasures, and soothed his conscience for allowing his rare genius to lie fallow. In a letter written in 1757 he says, "To be employed is to be happy;" but he adds, "This principle of mine (and I am convinced of its truth) has, as usual, no influence on my practice. I am alone and ennuyd to the last degree, yet do nothing." The words are not to be taken literally. Few men, free
from the compulsion of necessity or of a profession, have employed themselves more steadily. There were not many fields of knowledge, with the exception of mathematics and the physical sciences, which he did not make his own. He read everything; and when his younger friend, the Reverend Norton Nicholls, expressed surprise at the extent of his reading, he said, “Why should you be surprised, for I do nothing else?” In reality Gray did much more than merely read; his “nothing else” took no account of the extraordinary range of copious and elaborate annotations which he made on the margins of his books, and in which the extent and thoroughness of his learning and the variety of his intellectual interests were abundantly displayed. Nor did it take account of his constant and careful observations of nature, and his exact records of them. He kept minute diaries, in which he entered daily notes on the weather, and recorded the opening of the flowers, the ripening of the harvests, the changes in the vegetation of the different seasons, the coming and departure of the birds, together with many miscellaneous remarks on the objects and aspects of nature.

We have no full description of his rooms in Pembroke College, but from scattered sentences in his letters it is plain that they had a pleasant air, and gave evidence in their arrangements and furnishings of his many accomplishments and fastidious taste. He was fond of music, and well acquainted with its
history and with the works of the great masters. There was a harpsichord in his study, and later a forte-piano, on which he often played. He was a skilful draughtsman with pen and pencil, and many portfolios of drawings and of engravings and musical scores lay about the room, or upon the shelves of his bookcases, wherever the crowd of books, of which he had a large and excellent collection, left space for them.

The ancient classics were his intimates; his knowledge of early English literature was beyond that of any of his contemporaries, with perhaps the exception of Warton, the historian of English poetry; and his familiarity with Shakespeare was that of a lover. He was master of Italian and of French, and was more or less acquainted with many other languages. His library represented the wide fields of his learning. As happens with every lover of books, the more he had the more he wanted, and "he had," writes the Reverend Mr. Cole, a familiar acquaintance of the poet in his later years, "not only a large collection in a room on the same floor with his chamber, but hired a room or two above his apartments which were completely filled with books." He adds, lighting up his description with a pleasant little gleam of the poet's character, "I have reason to mention this . . . for he was continually lending to me from his store."

In the windows of his room were boxes of flowers, which he tended with special care. "And so you have a garden of your
"own," he wrote to his friend Nicholls, "and you plant and transplant, and are dirty and amused; are you not ashamed of yourself? Why, I have no such things, you monster; nor ever shall be dirty or amused as long as I live! My gardens are in the window, like those of a lodger up three pair of stairs in Petticoat Lane or Camomile Street, and they go to bed regularly under the same roof that I do."

"The favorite study of Mr. Gray for the last ten years of his life," says Mason in his Memoirs of the poet, "was Natural History. . . . He followed it closely, and often said that he thought it a singular felicity to have engaged in it, as, besides the constant amusement it gave him in his chamber, it led him more frequently out into the fields, and, by making his life less sedentary, improved the general course of his health and spirits." Gray's letters afford abundant confirmation of Mason's words, but still stronger evidence of his devotion to the study of nature is found in the marginal notes with which he enriched the pages of his books. Mason speaks especially of his notes on Hudson's Flora Anglica, and on the Systema Naturae of Linnaeus, "which latter he interleaved and filled almost entirely." In a letter written after the poet's death, Mr. Cole says: "He had Linnaeus's Works interleaved always before him, when I have accidentally called upon him."

Gray bequeathed to Mason his manuscripts and the better
part of his books, among them this copy of the *Systema Naturae*. At Mason’s death, in 1797, they passed to Mr. Richard Stonhewer, one of Gray’s oldest friends, and when he died they came into the possession of his executor, the Reverend Mr. Bright of Skeffington Hall, Leicestershire. When Mr. T. J. Mathias was preparing his edition of Gray’s *Works*, which appeared in two quarto volumes in 1814, Mr. Bright placed at his disposal the mass of Gray’s manuscripts, whether in independent note-books or on the margins of printed books, and from them Mr. Mathias selected the material which fills his second volume. Among his selections were specimens of Gray’s annotations to the *Linnaeus*; but though they occupy twenty-five pages they represent only an inconsiderable part of the notes. Some thirty years later, in 1845, many of the books and manuscripts of Gray which Mr. Bright had possessed were sold at auction in London. Most of them were purchased by Mr. Penn of Stoke Pogis, who occupied the house called West End, which had belonged to Gray’s uncle, Mr. Rogers, and in which Gray’s mother had spent the last years of her life, and where she had died. Some years later Mr. Penn sold the manuscripts at auction, and apparently disposed of the mass of the books by private sale to a bookseller. At any rate some of the books got into the market, and were dispersed. The *Linnaeus* finally found its way into the hands of Mr. Ruskin. He kept it among his treasures for
many years, and after his death it was given to me by his cousin and heir, Mrs. Arthur Severn.

Linnaeus was the elder contemporary of Gray by nine years, and his life lasted for nearly seven years after the death of the poet. The first edition of his famous work was published in 1735, when he was but twenty-eight years old. It presented a comprehensive view of the three realms of nature,—the animal, the vegetable and the mineral,—and in its admirable system and not less admirable definitions brought an order into the study of zoology and botany which had hitherto been lacking. It at once became the chief manual of students of Natural History, but the very stimulus and guidance it afforded led to such increase of knowledge that the work required frequent revision and enlargement, and in the tenth edition, published in 1758, Linnaeus embodied the results of more than twenty years of investigation and reflection. This was the edition which Gray used and annotated to such extent that his additions and illustrations are found on almost every page of the two volumes which treat of animals and plants, and if printed would form a volume at least equal in size to one of the original.

The work which these volumes exhibit is so remarkable a monument of Gray's learning and industry, and throws so much light on his occupations and interests, especially during the last ten years of his life, that some knowledge of it seems essential, not
only to the understanding of the course of his days, but even more to a just appreciation of his character and his acquisitions.

The first volume of the *Systema Naturae*, treating of the Animal Kingdom, has eight hundred and twenty-four pages; the second, treating of Plants, contains five hundred and sixty-six. Gray had both volumes interleaved, thus doubling their size. He divided the first into two parts, one comprising the portion dealing with Mammalia, Birds, Amphibia and Fishes, the other the portion treating of Insects and Vermes. This first part of the first volume is of three hundred and thirty-eight printed pages, so that interleaved it consists of six hundred and seventy-six pages in all, of which six hundred and twenty-two contain notes by Gray; of the fifty-four which have no notes, twenty-eight are of the general introduction, six are occupied with the lists of genera and species, while eleven only belong to the descriptive text, and most of these are in the section of Pisces. The notes vary greatly in character and in extent,—some consist of mere marks of reference, but most of them are of considerable length, often occupying a large part or even the whole of a page. Their main object was to add information, gathered chiefly from books but largely also from his own observation, to the brief scientific descriptions of Linnaeus. Some of the notes are in English, but most of them are in Latin, with numerous citations in French or Italian. Gray wrote Latin with ease, and with mastery of a large
Pardus mas, Pantera femina. Alp. egypt. 237. t. 15. f. 2.
Pardalis. Raj. quadr. 166.
Tigris mexicana. Hern. mex. 498. t. 498.
Habitat in Indiis.

Onca. 4. F. cauda elongata, corpore flavescente maculis nigris rotundato angulatis medio flavis. 2 f t 5 inches ½ long.
Jagura, Macogr. bras. 235. weight 85 lb. 2 oz. The mas.
Habitat in America meridionali.

Pardalis. 5. F. cauda elongata, corpore maculis superioribus virgo-
tis; inferioribus orbicularatis. Syd. nat. 4. n. 4.

Catus. 6. F. cauda elongata, corpore fuscis nigris. dor-
falibus longitudinalibus tribus; lateralibus spiralis.
Felis cauda elongata, auribus aequalibus. Fauo. fusc. 3.
Syd. nat. 4. n. 6.
Raj. quadr. 90.
Habitat in Europe australis fuscis.

Moribus congenerum, tranquilla, ore molat, caudam erigit; excita in giglitima, scandit, irata fremit olde-
re ambrosia, Murum Leo, in prae cius intenta cau-
dam movet, oculi noctu lucent, inibiando prae cium bar-
rit, clamando rixandique misere amat. Pupilla in-
terdiu perpendiculari oblonga, noctu tereti ampliata;
anguibus complicatis incidit, parte bibit, urina coro-
lica, stercus sepelit, cornes edis vegetabilisque repuit,
us insani tempesata manus laquit, dorsum in tenebris
elctrificat, in alium aelia decidit in pedes. Puleces nu-
habet: Deeleatur Maro, Nepeta, Valeriana.

8. F. cauda mediocris, colore cervino simplici pilis
auricularis: frontibus, ventre albidis; auriculis testis nigris.

<table>
<thead>
<tr>
<th>Species</th>
<th>Description</th>
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<tbody>
<tr>
<td>Pardus mas</td>
<td>Pantera femina. Alp. egypt. 237. t. 15. f. 2.</td>
</tr>
<tr>
<td>Pardalis</td>
<td>Raj. quadr. 166.</td>
</tr>
<tr>
<td>Tigris mexicana</td>
<td>Hern. mex. 498. t. 498.</td>
</tr>
<tr>
<td>Onca</td>
<td>F. cauda elongata, corpore flavescente maculis nigris rotundato angulatis medio flavis. 2 f t 5 inches ½ long.</td>
</tr>
<tr>
<td>Cato - Pardus - Mexicanus</td>
<td>Hern. mex. 512. t. 512.</td>
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<tr>
<td>Catus</td>
<td>F. cauda elongata, corpore fuscis nigris. dorfalibus longitudinalibus tribus; lateralibus spiralis.</td>
</tr>
<tr>
<td>Felis cauda elongata</td>
<td>Auribus aequalibus. Fauo. fusc. 3.</td>
</tr>
<tr>
<td>Felis vulgo Catus</td>
<td>Gefst. quadr. 98. Aldr. quadr. 565.</td>
</tr>
</tbody>
</table>

8. F. cauda mediocris, colore cervino simplici pilis
4. Samules eavit in greges, hominesque incertos aut dormientes; ventres
pliaque parum animosius canum minus (Biffon, yg.) piscem eat rep
ajutat canis instar famelice (Marigr. i. 6).

5. Samina (ut videtur) hic descripsit. Mas pulchrior, pulchriorque
rectus, sedus et alius; fascis avis intermodum longi, interstate, testaceus, nig
parastatis, marginatis, rectus, ab domo, pedes, punctatis frequentiis
rigidis, fascis per rachis. Quaia nigra, calida malleus quaedis rigidus
plano ut femina, mensa expedita, carne cruda usque adeo, est uel
musque uel simile animale vix instantem vix sustinet. Samina, donec mal
vicitur, nihil gaudet: gansulis plures partiet. animal non manuaccli
facerit, eumdem tamen: greges protectus, arboreis scando. hic quaque fi
Tigra a gallis vocatur. (Biffon 13. 239)

6. Femus domesticus major, griseus (rufo admisso) fascis nigris, cauda major
pedem celat, variabilis nigricantilis, in silvis aliquando in domo
vexit, ubi in silvis longiores; quod nos eam (det variis) inveni.
Domestica Brasilinna, verum expedita. Mexicanorum, sunt aut
res varia. (vide Biffon 13. 243) his suis americanisdicat. in eis
non in frequentes, quod nos eam.
Domestico, parum decus, pulchrum, adutariam, domino duxit. Laren
capton, officinar, amat junior mune luisus lenius, eam, adultus erat
approxit. quod sam chica (mare dominicanus) & aliganto s
ipsum, marem adjuvando appellat, mordit, & ad venemum, quasi compelti
die 55 uterum gerint, pullos circern parit. quae ad utrumque, a
quando, & ipso mater, mamma 8; penis brevis, glans canica recti
adexit, dentes 30 postes ad Iacerandum, quam ad recessum, aut ma
blemum partum. colores variat, tenuis nigri; capitis albus; cinerea
fascilis fuscis nigris; rufus, malleus magis latarius. rufus, adolor albo
malleo, albo nigro, rufus variis; &c. &c. tres autem alia principales et
estates.

7. Cineas cæsures cereus. malleus nullis, pilis seneceis, spitis
speratus 2. Pileus longis, adutariam, dependentibus.

8. Vide (ni sit) (transact. 1763. p. 579. 2 a Pascuas). ubiis: the figure is very bad:
there were two of them in the forest this year; a female (here described)
ix ut was tame; & a Male, which had some black marks on the face.
seem to have a deeper fur, & was wild.7... capres, arces, &c. praebet
sanguinem avii sustinent. Leonis duxit, credior, cujus velut aequa
mitet arboreis scando: canes ipso majores dilatatis (Biffon) 19
vocabulary; his style in the notes is concise, and occasionally in the description of an animal or a plant there are striking felicity and vigour in his expression. Gray's handwriting is exquisite; it is small and fine but always distinct, with ten to twelve words in an average line, with few erasures or insertions, and scarcely ever with a blot. A facsimile of one of the printed pages and of its opposite interleaved page will serve better than any description to give a correct image of his work.

In his descriptions of animals Linnaeus frequently gives beside the Latin name its synonym in various languages, but on the margins of the text Gray adds greatly to the number of the synonyms, often citing from remote and little known tongues. Thus names occur from the following languages: English, Welsh, Erse, French, German, Italian, Spanish, Portuguese, Dutch, Swedish, Danish, Norwegian, Russian, Polish, Ancient and Modern Greek, Hebrew, Arabic, Persian, Mexican, Brazilian, Peruvian, and these are far from exhausting the list.

The citations from works on Natural History, books of Travel, Transactions of learned Societies, which abound in his notes, and the still more numerous references to them, show the wide range of Gray's reading. The list of books quoted or referred to runs up to not far from one hundred distinct titles, many of them of works in numerous volumes. Beside general works on Natural History, and the Transactions of learned Societies they
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include many special treatises and many narratives of travel. From Aristotle to Pliny, from Pliny to Buffon, Gray has gleaned the whole field.

The second part of the first volume of the Systema has four hundred and eighty-five pages of text, or nine hundred and seventy of text and interleaving, of which less than twenty are without a note or some mark of reference, while most of them contain more than one note, often of great length. The fly-leaves at the beginning are occupied with a vocabulary, Termini Artis, and a list of Latin terms of colour with their English equivalents. The notes on Insects are frequently of special interest from the evidence they afford of personal observation, and from their full and minute descriptions drawn from direct study of the living creatures. These descriptions in many cases enter into greater detail than those given by Linnaeus, and furnish proof of Gray's excellence as a descriptive naturalist. It appears from them that he had a collection of insects, and was on the watch for specimens wherever he might be. Such entries are frequent as "specimen nostrum;" "noster, sub fine mensis Junii in solidagine captus;" "ad Hartlepool in arenâ maris sub saxo inveni;" "mense Junio cepi in pratis juxta Marylebone;" "in pratis Chelseianis prope Thamesin mense Maio cepi;" "cepi in Hyde Park sub fine mensis Maii."

An almost complete record of the places where Gray stayed
and of his journeys in England and Scotland during the last ten years of his life might be made up from these entries. Thus in 1759 and 1760 he was living in London, where, as he says in a letter to his friend Dr. Wharton (September, 1759), “I do not see much myself of the face of nature here, but I inquire;” but, as the passages just cited show, he was catching insects in the fields of Marylebone and of Chelsea, and in Hyde Park, and there are not a few entries of “prope Londinum cept” or “repertus est.” Similar entries show him to have been in Kent, in Suffolk, in Hampshire, in Cornwall, in Yorkshire and Lancashire, and in Durham at Hartlepool on the coast. The dates of his visits to these different regions may be gathered from his letters; and while one might learn from the letters that he was a keen and constant observer of nature, the reader would not gain from them even a faint conception of his devotion to the study of natural objects and his extraordinary proficiency as a naturalist. He did not claim the interest of his friends in pursuits for which they might have little inclination or sympathy, and so far as appears he kept up no relations with other students in the same field.

The third volume of Gray’s copy (the second of the Systema) is devoted to Plants, and has eleven hundred and twenty-two pages of text and interleaving. The notes are not less numerous, but they are for the most part briefer than in the preceding volumes. He was an accomplished botanist, and his notes are
excellent in their succinct statement of distinctive characteristics, and in the variety of information conveyed in them. They are, almost without exception, confined to fact, but now and then there is a sentence in them which reveals the poet. For instance, his note on the Gentianella is: "Planta humilis, flos amplius limbo fulgentissime caeruleo, quo nihil in herbis pulchrior." On Coffea he writes: "Una e tribus istis mysteriosis plantis, quas vel misericors vel iratus Deus orbi proposuit. Witsenii curâ ex Arabiâ Felici semen in Javam delatum est: nunc in Americâ colitur et frugem copioso profert. Arbuscula est rectissima, 12 pedes alta, flore albo odoratissimo, fructu rubro (H: Cliff:).

Pasqua, a Greek, servant to Mr. Edwards, a Smyrna merchant, set up the first Coffee-House in London about 1652 in St. Michael's Cornhill Churchyard." The entry opposite Nicotiana is: "Opere Joh. Nicotii, legati apud Lusitanos, Gallis primum innotuit anno 1560. Herba nunc per orbem adorata, licet venenata."

In addition to the notes with which these volumes are crowded, and even of more interest, as an illustration of Gray's gifts and accomplishments, are a multitude of pen-and-ink drawings of birds, of insects and of mollusks and testacea. These drawings, as may be seen from the facsimiles contained in this volume, are the work not only of a good observer, but also of a skilful draughtsman. In the spirit with which the characteristic features
and expression of the animals represented are rendered, and in
the vigour and refinement of touch, many of these drawings are
hardly to be surpassed, and their number is such as to show that
they must have been executed with ease. Thus, in the first part
of the first volume there are twenty-four representations of the
heads of birds, and in the second part of the same volume there
are no less than one hundred and seventy-two drawings of in-
sects or of parts of them, and twenty-eight of mollusks and tes-
tacea. Many of the drawings of the parts of insects are enlarged,
and they are noted as “microscopio auctum” or “lente visum,” or
with words to like effect.

In a letter to his old friend Dr. Wharton, in 1760, not far
from the time when he was beginning his work on this copy of
the Systema Naturæ, Gray wrote: “To find one’s self business,
I am persuaded, is the great art of life: . . . some spirit, some-
thing of genius (more than common) is required to teach a man
to employ himself.” The Linnaeus shows that his genius was suf-
ficient for this task. “Perhaps,” said one of his old friends,
shortly after his death,—“perhaps he was the most learned man
in Europe. . . . But he was also a good man, a well-bred man, a
man of virtue and humanity.” That remarkable Swiss youth,
Bonstetten, who by his many gifts and graces won the heart of
Gray in the year before the poet’s death, in a charming letter
from Cambridge to their common friend, the Reverend Norton
Nicholls, tells in simple, imperfect English of his life there and of Gray's kindness to him. "After breakfast," he says, "appear Shakespeare and old Lineus [sic] struggling together as two ghosts would do for a damned soul. Sometimes the one gets the better, sometimes the other."

Thus employed with Shakespeare and Linnaeus, content with either, student and lover of both, and of all that both represent, we have our last glimpse of the solitary student of nature and of books, "perhaps the most learned man in Europe," and the author of the poem which, says Mr. John Morley, "has for nearly a century and a half given to greater multitudes of men more of the exquisite pleasure of poetry than any other single piece in all the glorious treasury of English verse."

On one of the first pages of the second part of the first volume of the Systema Naturæ, Gray has written the following words of Aristotle. They indicate the deeper thought which animated his studies of nature.


"Wherefore one ought not to feel a childish dislike at inspecting the lowest animals, for in every object of nature dwells something marvellous."

"I command you to enter with confidence, for even here are gods."
SELECTIONS
FROM THE NOTES OF GRAY IN HIS COPY OF
THE SYSTEMA NATURÆ OF LINNÆUS
WITH FACSIMILES OF SOME OF THE PAGES
SELECTIONS
FROM THE NOTES OF GRAY IN HIS COPY
OF THE SYSTEMA NATURÆ

The following selections have been made with the object of showing the general character and the great variety of Gray's notes, while the facsimiles illustrate the excellence of his drawings, and exhibit the aspect of the pages. But the mass of his work cannot be shown, and yet it is the mass which alone can convey a true impression of his diligence, of the range of his reading, of the constancy and accuracy of his observation, and of his skill as a descriptive naturalist. He does not appear to have intended to contribute to the advance of knowledge; his work was undertaken for its own sake, and it remains as the chief monument of the occupations of his later years.¹

¹ In printing these selections the text has been closely followed, except occasionally in its punctuation, and except also in a peculiarity of Gray's writing, that of frequently beginning a sentence without a capital.

(22)
The Fox, or Tod

*Vulpes*


*Felis catus*

*The Cat*

Domesticus parum docilis, subdolus, adulatorius; domino dor-sum, latera, caput, affricare amat. Junior mire lusibus deditus et jocis; adultus tranquillior. Bis quotannis fœmina (vere scili-cet et autumno) et aliquando sæpius, marem ejulando appellat, mordet, et ad venerem quasi compellit; dies 55 uterum gerit; pullos circ. 6 parit, quos mas sæpe devorat, aliquando et ipsa mater. Mammæ 8. Penis brevis, glande conicâ retrorsum acu-
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leata. Dentes 30 potius ad lacerandum, quam ad rodendum aut masticandum parati. Colore variat: totus niger; totus albus; cinereus maculis fascisq nigris; rufus maculis magis saturate rufis; bicolor albo-niger; tricolor, albo, nigro, rufoq. varius: &c. &c. Tres autem aliae principales varietates:


Ancyranus 2. Pilis longis, undulatis, dependentibus.

Sinensis 3. Auriculis pendulis, pilis longis (Buffon, v. 6).

[p. 42.]

MUSTELA ichneumon

The Pharaoh’s Rat, or Mungo


[p. 43.]
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Mus Germanicus

The Hanover Rat

Cauda elongata subnuda, dorso & fronte gibbis, supra cinereorufescens, infra albidus. 9 inches ¼ long, tail 7½. weigh’d 13 oz. 5 Dr. ½. Circ. ann. 1728 paucis abhinc annis in Anglia notus. M. Ratto major, robustior, ferocior, quem fere hospes in exilium pepulit. Antra in ripis excavat, optime natans, horrea, domosq infestat, cuniculorum, gallinarum, &c. pullos enecat, acerrime mordet, cum cato fortiter dimicat, quem aliquando in fugam vertit, canum furonumq præda. Ter quotannis parit, unà vice 12 ad 19 catellos (Buffon, v. 8). Origo incerta. In Norvegia ignotus. [p. 61.]

Camelus dromedarius

The Camel

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AVES

LIST OF ALL THE BIRDS FOUND IN GREAT BRITAIN¹

Those mark'd with * are scarce birds with us. Those with ** are extremely rare. Those with † are usually eaten.

FALCONES

1. The Brown Ring-tail’d Eagle **
2. The Ringtail, or Hen-Harrier
3. The Kite
4. The Falcon-Gentle **
5. The Blew-Hawk **
6. The Hobby
7. The Buzzard
8. The Kestrill
9. The Bald-Buzzard
10. The Honey-Buzzard
11. The Moor-Buzzard
12. The Goshawk
13. The Sparrow-Hawk

STRIGES

14. The Horn-Owl **
15. The White-Owl

¹A list similar to this of the Birds precedes the other Classes of Animals in this part of the first volume.

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16. The Screech-Owl
17. The Grey-Owl

LANII

18. The Great Butcher-bird
19. The Flusher
20. The Bohemia-Chatterer **

CORVI

21. The Raven
22. The Carrion-Crow
23. The Rook ♠
24. The Royston-Crow
25. The Jack-daw
26. The Jay
27. The Magpie
28. The Rock-Ousel
29. The Cuckow (CUCULUS)
30. The Wryneck (JYNX)

PICI

31. The Green Woodpecker
32. The Greater Spotted Woodpecker
33. The Lesser " "
34. The Least " "
35. The Nuthatch (SITTA)
36. The Kings-fisher (ALCEDO)

Stridula
Ulula
Excubitor
Collurio
Garrulus
Corax
Corona
Frugilegus
Cornix
Monedula
Glandarius
Pica
Infraustus
Canorus
Torquilla
Viridis
Major
Medius
Minor
Europea
Ispida

(27)
37. The Hoopoe**  
   (a) The Hoopoe**  

38. The Cornish-Crow  
   (a) The Cornish-Crow

39. The Tree-Creeper (Certha)  

   (a) The Tree-Creeper (Certha)

40. The Wild-Swan  
   (a) The Swan†

41. The Wild-Goose  
   (a) The Goose†

42. The Wild Duck†  
   (a) The Wild Duck†

43. The Bergander  

44. The Swan-Goose†  

45. The Great Black-Duck  

46. The Scoter, or Black-Diver  

47. The Canada Goose  

48. The Brent-Goose, or Barnacle†  

49. The St. Cuthbert's Duck**  

50. The Muscovy-Duck†  

51. The Shoveler†  

52. The yellow-leg'd Shoveler  

53. The Gadwall, or Gray  

54. The Golden-Eye  

55. The Widgeon†  

(28)
56. The Sea-Pheasant, or Easterling

57. The Pochard, or Dun-bird

58. The Teal

59. The Summer-Teal

60. The hook-bill’d Duck

61. The tufted Duck

Mergi
62. The Gooseander, or Dun-diver

63. The long-beak’d Duck

64. The Smew, or Lough-diver

65. The Weesel-Coot

Alce
66. The Rasor-Bill

67. The Puffin

68. The Guillemot

69. The Puffinet, or Sea-Turtle

70. The Greenland Dove

Pelecani
71. The Cormorant

72. The Shag

73. The Soland Goose, or Gannet

Columbi
74. The Ember-Goose

75. The great crested Loon

(29)
76. The Didapper, or Dobchick  

LARI

77. The Grey-Gull, or Tarrock  

78. The Herring-Gull  

79. The great black and white Gull  

80. The Coddy-moddy  

STERNE

81. The Sea-Swallow, or Tern  

82. The Brown Tern  

ARDEÆ

83. The Crane  

84. The Heron  

85. The White Heron *  

86. The Bittern †  

SCLOPACES

87. The Red-Shank †  

88. The Curlew †  

89. The Whimbrel  

90. The Woodcock †  

91. The Snipe †  

92. The Godwit, or Yarwhelp †  

TRINGÆ

93. The Ruff †  

(30)
AS A NATURALIST

94. The Lapwing †
95. The Turnstone
96. The Grey coot-footed Stint **
97. The Sand-piper
98. The Knot †
99. The Grey Plover †

Vanellus
Interpres
Phalaropus
Hypoleucus
Canutus ?
Squatarola

CHARADRII

100. The Green Plover †
101. The Sea-Lark
102. The Dottrell †
103. The Stone-Curlew
104. The Shooing-Horn ** (Recurvirostra)
105. The Sea-Pie (Hematopus)

Pluvialis
Hiaticula
Morinellus
Oedicnemus
Avosetta
Ostralegus

FULICÆ

106. The Coot †
107. The Moor-Hen †

Atra
Chloropus

RALLI

108. The Land-Rail ✦
109. The Water-Rail †

Crex
Aquaticus

OTIDES

110. The Bustard †
111. The Small Bustard ** †
112. The Peacock † (Pavo)
113. The Turkey † (Meleagris)

Tarda
Tetrax
Cristatus
Gallopavo

( 31 )
THE POET GRAY

PHASIANI

114. The Cock †    Gallus
115. The Guinea-Hen †    Meleagris
116. The Pheasant †    Colchicus

TETRAONES

117. The Heath-cock, or Black Game †    Tetrix
118. The Grous, or Red-Game †    Rubens
119. The Partridge †    Perdix
120. The Quail †    Coturnix

COLUMBÆ

121. The Wood-Pigeon    Oenas
   (a) The Pigeon †
122. The Turtle-Dove * †    Turtur

ALAUDÆ

123. The Sky-Lark †    Arvensis
124. The Tit-Lark    Pratensis
125. The Wood-Lark    Arborea
126. The Pippit    Campestris
127. The Water-Ousel (STURNUS)    Cinclus

TURDI

128. The Missel-Thrush    Viscivorus
129. The Feldefare †    Pilaris
130. The Red-wing    Iliacus
131. The Song-Thrush †    Musicus

( 32 )
If these, the Canada-Goose, Swan-Goose, Muscovy-Duck, Peacock, Turkey, Guinea-Fowl, Peasant-Cock, and her, have undoubtedly imported into these our islands.
AS A NATURALIST

132. The Rose-Ousel ** Roseus
133. The Black-bird Merula
134. The Ring-Ousel Torquatus

LOXILÉ

135. The Cross-bill ** Curvirostra
136. The Gross-beak ** Coccothraustes
137. The Bull-finch Pyrrhula
138. The Green-finch Chloris

EMBERIZE

139. The Pied-Chaffinch ** Nivalis
140. The Bunting-Lark Calandra
141. The Yellow-Hamber Citrinella
142. The Chaffinch (FRINGILÉ) Cælebs
143. The Brambling (FRINGILÉ) Montifringilla
144. The Starling (STURNUS) Vulg.¹

FRINGILÉ

145. The Aberduvine, or Siskin * Spinus
146. The Linnet Linaria
147. The Red-headed Linnet Cannab.
148. The Sparrow † Dom.
149. The Reed-Sparrow Schæen.
150. The Mountain-Sparrow * Mont.

¹The facsimile shows that the space on the page is so occupied with drawings that for lack of room many of the following names are abbreviated.]
## THE POET GRAY

151. The Gold-finch  
152. The Hedge-Sparrow  
153. The Nightingale  
154. The Pettychaps  
155. The Sedge-bird  
156. The White-Throat  
157. The Wagtail  
158. The Yellow-Wagtail  
159. The Whin-chat  
160. The Wheat-ear †  
161. The Black-cap  
162. The Red-start  
163. The Robin  
164. The Wren  
165. The Copped Wren *  
166. The Green Wren

### Motacille

Card.

152. The Hedge-Sparrow  
153. The Nightingale  
154. The Pettychaps  
155. The Sedge-bird  
160. The Wheat-ear †  
161. The Black-cap  
162. The Red-start  
163. The Robin  
164. The Wren  
165. The Copped Wren *

### Pari

Crist.

167. The Crested Titmouse  
168. The Great Titmouse  
169. The Tom-tit  
170. The Coal-mouse  
171. The Marsh Titmouse  
172. The long-tail’d Titmouse

(34)
Names of Birds found in Scotland, as yet uncertain.

1. The Duxtoese.-
2. The Mystys-Goese, or Bras Seporna.
3. The Cole, or Chittor, Caudaloni, or ase minor, Laurina tecta. an Ann Mib.
4. The Balsanach, Roca Briscus.
5. The Kiteyorina, que, Syl. Laurina.
6. The Sea-Coole.
7. The Sea-Cock.
8. The Sea-Cock.
10. The Sype.
11. The Sypey on Columbia Gyle.
12. The Badoch.
13. The Kalsanger.
15. The Torpede-Cock.
16. The Kite.
17. The Kansan.

Birds found at Hartlepool in the Bishoprick of Durham as yet doubtful. 1765.

1. The Sager. - Lorus Americus.
2. The Sin-Coon, an his Satyr Cernola.
3. The Sapsy. - Stearne Americus.
4. The Lvbby Ocy.
5. The Beaubeaked fool. - Lorus Alertifidis.
7. The Broadcloth, Finge.
8. The Creey - an Finge.
10. The Pike.
11. The Sea.
12. The Tuning, Finge Alpina.
13. The Creamclor of White Finge, an Emberia Rivalis.
15. The Butter-Whal.
AS A NATURALIST

1. The Beardmanica

2. The Swallow

3. The Marten

4. The Sand-Marten

5. The Swift

6. The Goatsucker

7. The Gair-fowl

8. The Pintar

9. The Guest Plover

10. The Peterill

11. The Stone-chat (M)

NAMES OF BIRDS

(2)

The Dunter-Goose

The Skeeling-Goose, or Anse-Goose

The Cock, crista, culet longus, or Anas Mollians

The Albanoch, Alca strepsis (n.)
AS A NATURALIST

173. The Beardmanica * Biarm.

Hirundines

174. The Swallow Rustic.
175. The Marten Urbic.
176. The Sand-Marten Ripar.
177. The Swift Apus
178. The Goatsucker (Caprimulgus) Europ.
179. The Gair-fowl, or Penguin ** (Alca) Impenn.
180. The Fulmar * (Procellaria) Glacialis
181. The Great Plover ** † (Scolopax) Glottis
182. The Peterill * (Procellaria) Pelagica
183. The Stone-chat (Motacilla) Rubicola

Of these the Canada-Goose, Swan-Goose, Muscovy-Duck, Peacock, Turkey, Guinea-Fowl, Pheasant, Cock & Hen, have been undoubtedly imported into these our islands.

NAMES OF BIRDS FOUND IN SCOTLAND
(AS YET UNCERTAIN)

1. The Dunter-Goose
2. The Skeeling-Goose, or Anas Tadorna ?
3. The Colk, cristata, cauda longa, ansere minor, lanugine tecta: an Anas Mollissima ?

(35)
5. The Kittiwake, a Gull. Larus *Rissa*.
6. The Pickerel
7. The Sea-Coulter
8. The Taster
9. The Sea-Cock
10. The Lyre
11. The Tyst, *an* Colymbus Grylle?
12. The Badoch
13. The Smlefanger
14. The Cockandy
15. The Thrissel-cock
16. The Gare
17. The Gawlin
18. The Rain-Goose
19. The Bonnivochil, Bishop, or Carrard
20. The Goylir, or Malifigy
21. The Sereachan-aittin.
22. The Faskidar. Larus Parasiticus

**BIRDS FOUND AT HARTLEPOOL IN THE BISHOPRICK OF DURHAM**

*(As yet doubtful—1765)*

1. The Teazer. Larus *Parasiticus*
2. The Rot-Goose, *an* Anas *Bernicla*?
AS A NATURALIST

3. The Terum. Sterna Hirundo
4. The Little Pet
5. The Black-headed Gull. Larus Ridibundus
6. The Willock. Alca Torda
7. The Brocket. Tringa
8. The Grey Stint, an Tringa Cinclus ?
9. The Black “
10. The White “
11. The Rae
12. The Dunling. Tringa Alpina
13. The French (or White) Linnet, an Embariza Nivalis ?
14. The Gold-Spink
15. The Curlew-Hilp
THE POET GRAY

Falco chrysætos

The True, or Royal Eagle

In rupibus præruptis nidus: ova 4 (Faun. Suec.). Voce querulâ, acutâ, clangit, ferociâ summâ (Aldrov.). Cadaveribus etiam prædem emortuis vescitur (Kramer). In Hiberniæ montibus, in Snowdon & in Cheviot, sed rarius, nidificat (Pennant, & Wallis) ad Warkworth in Northumbriâ.

Falco milvus

The Kite, or Glede


Upupa cristata

The Hoopoe, or Hoop

In Northumbriâ interdum, sed rarius, & in agro Surreiâno & Cornubiâ visa. Sono proprium nomen exprimit; Suecis rusticis belli omen. Ova in cavis arboribus duo cinerea ponit (Linn. F. Suec.) crista duplex, plicatilis, testacea, apicibus nigris (Brisson, v. 2, p. 456). Victitat insectis (Kramer). In Scotiâ etiam & Or-
la Creta nasquam non conspicius in aere lumine. Diminutum, more- 
experationis in prado suo intentus; voca clara, sibilis. Hæmis- 
rapea in foco venalis] fascia genasum nigra; gula lutea; remiges 
rectrices viridica-carunculae; ariis occulorum rubra, rostro pere- 
sum. (Brison, 1. 584) pedes rufa-fuscis; ova in caverna profunda 
scantata. 4 vel 5 alla ponit, ubi nidi sunt a musco consistit. (Kner) 
Nigra etiam pars vulgare gregatum impetatur. (Audub. 1767) 
Fascia per ocellum, culiculus, rectores nigra; rectrices intermedia 
regimenta, angusta, apice fusca. (Bou.)

Rostrum viridi-nitens: caput cineræum.

Upupa epops, N. 1.
rostrum.

In Hertugbrœa interdum, sed rarius, & ingens henüz, vises ab ope: 
primum nomine prof: 
bus duas cinerea ponit (Lin. & Linn.) crista duplex, phæstis, testacea, 
præcibus nigri. (Brison, 1. 584) victitavit insectis. (Kramer) in 
Hercia etiam & oreadibus visi est Sicilia, in insula etiam Tailio. nasi 
migratoria. (Sav. &c.)
AS A NATURALIST

cadibus visa est (Sibbald). In insulâ etiam Zeylonâ avis migratoria (Edw. l.c.).

[ p. 117. ]

ANAS TADORNA

The Sheldrake, or Burrow-Duck, or Bergander


[ p. 122. ]
THE POET GRAY

ANAS GLAUCION

The Lesser Red-headed Duck


MELEAGRIS GALLOPAVO

The Turkey

Caro lautissima, candidissima. Mas inflatus, capite præ irâ rubicundo, gressu lento & ridicule superbo circa fœminarum pullo-rumq cohortem vigilat; canes, homines etiam (præsertim si terga vertant, aut veste rubrâ utantur) rostro, unguibus, alis adoritur, quamvis innoxius & imbecillus. Vox tumultuosa, cum fragore effusa. Principio sæculi 16i, ut avis mira & peregrina a P. Gillio & Longolio apud Gesner. descriptur; nunc ubiq in Europâ com-

( 40 )
mannis in villarum cortibus (it was first brought into England in 1530). Fœmina carunculā frontis breviore; caudâ nunquam erectâ, timidum animal, calcaribus carens, interdum pectore barbato (Brisson, v. 1, p. 160). Sylvestris pondere aliquando 60 lb., sæpe 40 lb. In vivariis Angliæ nunc propagatur; carne sapidissimâ, Phasianum ëmulatur.

**Alauda arborea**

*The Wood-Lark*

Gregatim volitando cantillat: cantus liquidus, varius, suavissimus, soli Lusciniae cedens. Arboribus insidet, primo vere & per autumnum integrum præcipue canora. Plumas capitis subinde in cristam erigit. Inter frutices ad sylvarum margines nidifitac.

Loxia pyrrhula

*The Bullfinch*

Hortis invisa, gemmis vescitur; voce simplici, sibilâ, clarâ. Musicas modulationes addiscit miro ingenio & docilitate, quas recitat fistulae tonos imitata. Facile cicuratur. Ova 5 parit in sepibus.

**Hirundo urbica**

*The Marten, or Martlet*

Paulo antequam migrant, mane congregantur in tectis soli expositis. Pedes albâ lanâ vestiti. Nidus parieti adhærens, ostio

(41)
THE POET GRAY


(42)
Caprimulgus
Europaei (N° 1)
caput.

AS A NATURALIST

AMPHIBIA REPTILIA

Lacerta vulgaris

The Newt, or Wall-Newt


AMPHIBIA NANTES

Raja

The Ray, Skate, or Flaire

Testulē illē parallelogrammi oblongi figurā, quarum longiora latera sandapilē aut vehiculi manualis in modum utrinque extensa sunt, æstu marino ejectae in arenosis frequentes littoribus, nihil aliud sunt quam ovorum testae Raiarum, aliorumq piscium cartilagineorum: aperto Raiē utero bina hujusmodi ova perfecte formata et partui proxima exemimus (Willughby, p. 76). These on the coast of Durham are call’d Sea-Purses, & in Cornwall Pizgee’s (i.e.) Fairie’s Purses. They are of a tough membranaceous substance more flexible than horn, but stiffer than leather: their colour is a dark reddish-brown, and shining (on the inside) like satten. [p. 231.]
In fluviis nostris, lacubus, piscinis fere omnibus frequentissimae.

... Our Ancestors divided them according to their size and price into Great-eels, Spitch-cock eels, Shaft-eels, Brewet-eels, Pimpering-eels, etc. tho' possibly this latter might be a fish of a different kind, for Gesner describing a species of Loach call'd in Germany Beizker or Meerput, adds, Idem aut simillimus fuerit, qui a Flandris Pymper-ele nominatur: e Flandria in Angliam importari audio. The smaller eels we now call Grigs. Nella città di Comacchio, la quale è circondata d'acqua salsa, si piglia gran quantità d'Anguille, che son le migliori di Lombardia, e si portano salate per tutta Italia (B. Scappi. p. 136). Ex Arno fl. anguillae omnes Augusto mense ad mare descendunt, ut ibidem pariant; fœtus autem a mari statis temporibus (a Februario ad Aprilem) ad Pisas usque ascendunt (Redi apud Raium, Synops. Pisc. p. 37). They are also caught in the sea at Southampton in October, but greenish of colour, and yellow on the belly, and at Hartlepool in summer, tho' small, not varying at all in colour.

[p. 245.]
AS A NATURALIST

MURENA CONGER

The Conger Eel

Congri mari refluö capti in fossis et puteis litoralibus Cornubiæ eviscerantur, sole exsiccatur, et resolvuntur in pulverem, qui in Portugalliam venditur et usurpatur vice farinæ avenaceæ (Robinson apud Willughby, append. pag. 27). Hodie neque aulæ principes, neque ipsi cupedivoræ, congrum magni faciunt: soli Hispani, Romanæ urbis inquilini, eum in summo honore habere videntur (P. Jovius, c. 30).

Il Gongoro è assai buono quando si piglia nella sua stagione, laqual comincia da Dicembre, e dura per tutto Marzo (B. Cappi). Dorsum lateraque cinerea; abdomen album; pinnæ cæruleascientes margine nigrice ante. Linea later. subelevata, recta; sub eâ punctorum ordo albidorum. Tentacula 2 rostri brevissima, obtusa; labia crassa, pulposa; dentes serrati, minimi; iris oculi argentea; pin. pect. radiis circ. 13; membr. branch. 7 tantum. P. d. (caudali analiq unita) infinitis. In Southampton, Oct. 9. observavi (45 inches long, 10 round, weigh’d 6½ lbs.) Vitæ tenax, ut anguilla; caro albissima, oculis grata, solida, sed insulsior, et aristis scatens innumeris.

GADUS MORHUA

The Cod, Keling, or Melwell

Ex hepatibus asellorum majorum fit oleum, quod lucernis aliis-

[ p. 252. ]

**Conus scorpius**

*The Father Lasher*

AS A NATURALIST


PLEURONECTES SOLEA

The Sole

Maxima in Belgicis Oceani litoribus; Romæ pedalem longitudinem raro superat; in lautioribus conviviis, in summâ etiam cæterorum piscium copiâ, magnam obinet claritatem (P. Jov. c. 26). Semper Angliæ mensis et Galliæ accepta. Nulli cedit suavitate et salubritate; semper charo constat, quamvis frequentissima. Testaceis vescitur, quorum testas menstruo quodam in visceribus dissolvit (Phil. Trans. 1744, p. 37. Collinson). Oculi magis inter se distantes quam in congeneribus; filamenta pilos imitantia, alba, innumera, in sinistrâ capitis parte; pinna caudæ subrotundata; ventrales minimaæ, exiles; pectoralis sinistra alba, dextra dimidio nigra (Arted.); os arcuatum. [p. 270.]

GASTEROSTEUS ACULEATUS

The Stickleback, or Bonstickle

Spinæ pro lubitu arrigit vel deprimit (Will. p. 341). Anterior corporis pars loricata tegmine osseo; pro pinnis ventralibus laminaæ duæ osseæ triangulares, singulæ aculeo valido armatae (ibid.). Rivuli & piscinæ fere omnes hoc pisse scatent, qui aliorum piscium (47)
THE POET GRAY


TRIGLA CUCULUS

The Red Gurnard

A nostris inter lautos pisces habetur: captus spinas erigit et sonitum curre edit, unde nomen (Will. pag. 281). In nostro specimine oris ambitus, opercula subtus, pinnæ ventrales, analis, caudalis, pectoraliumque basis, rubræ; latera etiam media rubescunt: caput supra totum, dorsumque cinereo-virescunt; venter albus; labium superius apice emarginatum, lobis rotundatis, asperis. Super-cilia spinosa; pone branchiarum opercula utrinque spina: pinnæ dorsales (quarum lma radiis spinosis) in sulco spinis utrinq. marginato recumbunt; linea lateralis recta, fusca. Corpus teretiusculum, postice attenuatum; caput magnum, fronte depressa. In Southampton observavi die secundo Octobris. Caro alba, solida, sapidissima; pinnæ pectoris maximæ, rotundatae, intus cinereo-virescentes, margine pulchre cæruleo; os magnum, labiis, palato,
linguâque scabris; radiis osseis arcuatis branchiorum intus obtuse dentatis; pinna caudae sub-bifida (ibid.).

CLUPEA ALOSA

The Shad, or Mother of Herrings

SABRINAM, fluvium nostrum, Martio & Aprili mense ascendunt pingues & ovis prægnantes, Maio macilentæ & effætæ ad mare redeunt (Will. p. 227). Itali pro magnitudine piscis variis nominibus appelant. Romæ pulparum mollitie & sapore primo vere æstimantur, sed spinulæ frequentes inter edendum molestæ sui-vitatis gratiam minuunt (P. Jovius, c. 37); gravi pretio ibi venundatur. In Pado etiam, Arno, Liri, Vulturno, &c. capitur. At Rome it comes into season in February, and lasts all May; it must be dressed the day it is caught (Bart. Cippi). Degli Agoni salati, che si pigliano in gran copia nel lago di Como, ne son portati per tutta Italia (B. Scappi, f. 129). The Irish call it a Pollan. In Southampton Octob: ineunte observavi. Squamae magnæ aurato-argentæ: dorsum pulchre cæruleo-virescens. Litura, maculae ovatae 4 s. 5. utrinq nigrindices. Cauda bifurca; linea later. recta.

CLUPEA ENCRASICOLUS

The Anchovy

Encrasicholi inveniuntur in mari Britannico, præsertim vero circa litora Cambro-britanniae, ubi numerosissime capiuntur, præ-
parantur, & hoc illuc transmittuntur sub falsa nomine *Shads*. Italics vix inferiores sunt (*Collins, de sale & piscaturâ*, p. 101). In litore Cataloniæ & Provinciæ magnis gregibus natantes ab initio Decembris ad Martium medium noctu accensis facibus capiuntur (*Encyclop.*). Corpus teretiusculum, pellucens; rictus amplius; cauda forcipata; squamae deciduae. [p. 318.]

**Cyprinus carasius**

*The Crucian, or Crusoe (in Suffolk)*


**Cyprinus auratus**

*The China Gold and Silver Fish*

*Piscium pulcherrimus,* e Chinâ primum in insulam S. Helenæ deinde in Angliam A.D. 1728 inventus in vivariis nostris facile propagatur. Fine Aprilis Maioq mense parit. Colore & magnitudine multum variat, apud nos sæpe pedalis, pinnâq caudæ (50)
AS A NATURALIST


Cyprinus argenteus

The White Bait

Maxilla inferiore longiore, iridibus argenteis. Habitat in mari Angliæ, flumina subiens. Thamesin aestate ad Blackwall & Woolwich usque magnâ copiâ ascendit.

THE POET GRAY

CYPRINUS ORSUS

The red-backed Chub, Rud, or Fin-scale


Back red, sides yellow-brown, scarlet spot on the gills, belly white, belly-fins and tail reddish, broad sides. The flesh is red, dry, short & wholesome.  

[p. 324.]
4. Elytrum.
5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
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4. Elytrum, forinaeae.
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7. Apex.

4. Elytrum, forinaeae.
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7. Apex.

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5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
5. Thorax.
7. Apex.

4. Elytrum, forinaeae.
5. Thorax.
7. Apex.
AS A NATURALIST

VOLUME I. PART 2.

INSECTA

[On a fly-leaf of this second part of the first volume Gray has written the following:—]

TERMINI ARTIS

Antennæ. Organa mobilia insectorum, ad oculos posita.

Setaceæ, quæ extrorsum tenuiores.

Filiformes, quibus eadem fere totius est crassities.

Moniliformes, quæ ex pluribus compositæ sunt globulis, faciemsq præbent monilis.

Clavatae, quæ extrorsum crassiore.

Capitatae, apicem globulo terminantes.

Fissiles, cum clava in lamellas longitudinaliter se dividit.

Perfoliatae, cum verticillatim lamellæ transversales apparent.

Pectinatae, quorum unum latus pilis instruitur in formam pectinis.

Barbatae, quæ pilis sine ordine fusis.

Aæ Primores, (in papilionibus) sunt majores, seu anteriores.

" Secundariae, posteriores.

Larva, vermiculus e semine insecti natus, antequam subierit metamorphosin.

Pupa, larva quum primam metamorphosin subierit, antequam in perfectum statum pervenerit.
Coleoptera, insecta, quorum alæ elytris tectæ sunt.

Hemiptera, insecta, quorum alæ non ex toto, sed ex parte, tectæ sunt elytris.

Gymnoptera, insecta elytris destituta.

Elytron, ala superior cornea, sive crustacea, quæ alas inferiores tenuiores tegit.

Scutellum, crusta parva inter elytrorum aut alarum paria ad basin thoracis colloca ta, quasi thoracis apex a tergo.

Sutura, rima quà coeunt elytra, vel cum thorace, vel inter se invicem.

Palpi, quasi antennulae, ad os collocati.

Halteres, capitella petiolata sub alis Dipterorum.

Elinguis, os nullum, unde insectum edere nequit.

Spirilinguis, os linguâ spirali simplici, vel duplici.

Tetrapus, 4 pedes unguiculati, licet sæpe duo alii absque unguibus.

[The following list of terms of colour is written on the leaf next after that on which are the Termini Artis.]

1. Testaceus, colour of a tile, or brick-dust.

2. Griseus, a mixture of brown and red, or red-hazel.

3. Rufus, same, more heighten'd with red.

4. Æneus, copper-colour'd, with the reddish lustre of that metal.

5. Ferrugineus, of a reddish-yellow, like the rust of iron.

6. Ater, of a deep and perfect black.

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AS A NATURALIST

7. Pallidus, a pale sordid flesh-colour, with a tint of yellow.
8. Sericeus, with a shining gloss, like silk-stuffs.
9. Holosericeus, with a pile, like velvet.
10. Auratus, with a golden gloss.
11. Piceus, black with an eye of red.
12. Violaceus, deep blew-purple, or indigo.
14. Fulvus, bright orange-tawney.
15. Cinereus, of a sordid yellowish-brown, or dark-olive.
17. Castaneus, a deep chesnut colour.
18. [A line obliterated.]
19. Fuscus, dark brown.
20. Cyaneus, deep-blew, like polish’d steel Neal’d in the fire.
22. Luteus, saffron-yellow.
23. Purpureus, scarlet.
THE POET GRAY

[The following verses descriptive of the Orders and Genera of Insects are on the inserted leaves opposite the characters of the Orders and Genera as given by Linnaeus. They are a mere piece of ingenious trifling, but they illustrate Gray's easy mastery of Latin versification. They were printed by Mathias in his Works of Gray, 1814, vol. ii. p. 570.]

I. COLEOPTERA

Alas loricâ tectas Coleoptera jactant.

* Antennis Clavatis

Serra pedum prodit Scarabæum et fissile cornu. 
Dermesti antennæ circum ambit lamina caulem, 
Qui caput incurvum timidus sub corpore celat. 
In pectus retrahens caput abdit claviger Hister. 
Occiput Attelabi in posticum vergit acumen. 
Curculio ingenti pretendent cornua rostro. 
Silpha leves peltæ atque elytrorum exporrigit oras. 
Truncus apex clavæ, atque antennula Coccionellæ.

Antennis Filiformibus

Cassida sub clypei totam se margine condit. 
Chrys'mela inflexâ loricæ stringitur orâ. 
Gibba caput Meloë incurvat, thorace rotundo. 
Oblongus frontem et tenues clypei exercit oras

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Insectum alatum in floribus Symphoricarpos victat. (Scopoli, p. 109)

Cerambix
Alarinus.

P. 23. (Geoffr.)

tera dilatata, holocarina, nigra, undae rubris cinereis longitutinis a variata. Pedes antici (in aliero sensu) corpore duplo longiores.ut reflexum, mystacee et supercallis rubra. (Sib. I.)
AS A NATURALIST

Tenebrio. Abdomen Mordellæ lamina vestit.
Curta elytra ostentat Staphylis, caudamque recurvam.

Antennis Setaceis

Tubere cervicis valet, antennisque Cerambyx.
Pectore Leptura est tereti, corpusque coarctat.
Flexile Cantharidis tegmen, laterumque papillæ.
Ast Elater resilit sterni mucrone supinus.
Maxillâ exertâ est, oculoque Cicindela grandi.
Bupresti antennæ gracies, cervice retractâ.
Nec Dytiscus iners setosâ remige plantâ.
Effigiem cordis Carabus dat pectore truncâ.
Necydalis curto ex elytro nudam explicat alam.
Curtum, at Forficulæ tegit hanc, cum forcipe caudâ.
Depressum Blattæ corpus, venterque bicornis.
Dente vorax Gryllus deflexis saltitât alis.

II. HEMIPTERA

DIMIDIAM rostrata gerunt Hemiptera crustam.
Foemina serpit humi interdum: volat æthere conjux.

Rostro Nepa rapax pollet, chelisque. Cicada
Fastigio alarum et rostrato pectore saltat.
Tela Cimex inflexa gerit, cruce complicat alas.
Notonecta crucem quoque fert, remosque pedales;

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THE POET GRAY

Cornua Aphis caudae et rostrum: sæpe erigit alas;
Deprimit has Chermes, dum saltat, pectore gibbo.
Coccus iners caudae setas, volitante marito;
Thrips alas angusta gerit, caudamque recurvam.

III. LEPIDOPTERA

Squamam alæ, linguae spiram Lepidoptera jactant.
Papilio clavam et squamosas subrigit alas.
Prismaticas Sphinx antennas, medioque tumentes;
At conicas gravis extendit sub nocte Phalæna.

IV. NEUROPTERA

Rete alæ nudum, atque hamos Neuroptera caudæ.
Dente alisque potens, secat æthera longa Libella.
Caudâ setigerâ, erectis stat Ephemera pennis.
Phryganea elinguis rugosas deprimit alas;
Hemerinusque bidens: planas tamen explicat ille.
Et rostro longo et caudâ Panorpa minatur.
Raphidia extento collo setam trahit unam.

V. HYMENOPTERA

At vitreas alas, jaculumque Hymenoptera caudæ,
Fœmineo data tela gregi, maribusque negata.

Telum abdit spirale Cynips, morsuque minatur. (58)
Squama alarum: microscopio visae.

Larva C. machaonnis. \( \text{L.} \) 27.

1. 

1. Saccula neurosilia.

2. Antenna clavato-capitata.

3. Lingua spiralis.

Pupa C. Polychrosis. \( \text{P.} \) 113.

3. Speciosissima, precedeti modo affinis.

4. Ornae magnitudinis, cella alarum in Mure oblongi, in femina or. labiis nigroline violacei cinerei (M2:264.)

5. Cauda alarum inferiorum longissima.

6. Mec magis fulvus; femina cinerea, aliquanto major. Lora vindex
   venera, jugo fulvo circulo nigro ad basia cinete, unda
   coni. prodent (Ry) mense Martio & Aprili phalana apparect

Ph: Noctua Cenula. Ph: Geometra
92° 87. Urácta, 12° 192.

Ph: Bombyx Quercus
92° 115.

Ph: Apalis Forticula. Ph: Fixea Culmella
92° 230. 12° 246.

92° 385.

Ph: Sestex. Bráinana
92° 202.
Sirex (sive Schremon) Giga. N° 1 (Reaum).

Abdomen petiolato. Stom: femina.

Saepe prae species ad novum genus Sirex transferenda (Silene p. 176) sine sub ventre medio aculeum excitat. Ultra caudam extenditur: auda musc. tereus, rectus, acutus; thorax aler; antenne lutae corpora dimidio breviores, alla ferrugineae (Silene p. 176 Reaumur).

Hic quoque Sirex est. Alius parvis plerique, ut species 3 precedent. (Silene p. 237) sequentes autem alia omnibus planis.
Maxillae Tentendi movent, erectores mediae
Inthemen inductae, tribus, horizontali
Haece in Anthis tentem locum occupant.
Sphex alioque eximio, quod Plaesos nunc
Alle aequum venas, aequationum nuptas
Equitante. Racionem habeas, legenseque
Deum, in quae tuae mysteria latent
Mystice communi carmine.
AS A NATURALIST

Maxillas Tenthredo movet, serramque bivalvem;
Ichneumon gracili triplex abdomine telum.
Haurit Apis linguâ incurvâ, quod vindicat ense.
Sphex alam expandit lævem, gladiumque recondit.
Alæ ruga notat Vespam, caudæque venenum;
Squamula Formicam tergi, telumque pedestrem,
Dum minor alată volitât cum conjuge conjux.
Mutilla impennis, sed caudâ spicula vibrat.

VI. DIPTERA

DIPTERA sub geminis alis se pondere librât.
Os Oestro nullum est, caudâque timetur inermi.
Longa caput Tipula est, labiisque et prædita palpis.
Palpis Musca caret, retrahitque proboscida labris;
Qua Tabanus gaudet pariter, palpis sub acutis.
Os Culicis molli e pharetrâ sua spicula vibrat;
Rostrum Empis durum et longum sub pectore curvat;
Porrigit articuli de cardine noxia Conops;
Porrigit (at rectum et conicum) sitibundus Asilus;
Longum et Bombylius, qui sugit mella volando.
Unguibus Hippobosca valet; vibrat breve telum.

VII. APRERA

APRERA se pedibus pennarum nescia jactant.
THE POET GRAY

CICINDELA CAMPESTRIS

Mensa Aprili medio in loco arenoso collium Hogmagog prope Cantabrigiam cepi; Maio etiam in pratis. Labium superius, & maxillarum bases flavescunt; dentes, palpi, infimiq antennarum articuli auro resplendent; harum summi tomentosi, opaci; oculi grandes nigrant; abdomen a tergo sub alis smaragdo viridius lucet; punctis albidis aliquando caret.


CIMEX GOTHICUS

NOSTER, quem in Solidagine cepi Julio mense medio, descriptioni
AS A NATURALIST


Coccus cacti

The Cochineal

COMMERCII Hispanicì pars maxima, regni Mexicanì thesaurus, auro atq argento æquiparandus. Quotannis in Europam importantur lb circiter 880,000. quæ æstimantur 15,050,690 Libr. Fr. monetæ. Servari potest detrimento nullo annis centum (Reaumur). In Georgiâ & Carolinâ australi Cacto Opuntiâ vescens non raro inventitur. Fœmina adulta viciae magnitudine, rubra; thorax convexus, glaber, abdomenie duplo longior; antennæ breviores; artus intumescentiâ corporis inutiles evadunt, & intra rugas conduntur. Mas pulicis magnitudine, glaber, ruber; alis 4 niveis incumentibus sub-patentibus, basi attenuatis; antennis thorace paulo lon-
THE POET GRAY

gioribus; collo coarctato, capite globoso; setis caudalibus, quadruplo corpore longioribus; agilissimus (Ellis). Fœmina tincturam illam nobilém, pretiosam, suppeditat lanae sericoq aptam; non lino, neque gossypio; e violaceo coccineam, additâ autem dissolutione stanni, igneo-coccineam, colorum omnium fulgidissimum. Insectum hoc sylvestre Cochenille Campetiane dicitur, domesticum autem Mesteque sive Tescalla (Encyclop. Teinture). [p. 457.]

MUSCA CUPRARIA


ACARUS CANCROIDES

TERMETE Pulsatorio victitat. Cutem hominum capite penetrans, unde papulae cum dolore horrendo. Motu retrogrado utitur (F. Suec.). In cistulâ ligneâ inter Hymenopterorum cadavera ambulantem die 1mo Julii observavi; motu directo tardiuscule progre-
AS A NATURALIST

diebatur, manibus chelatis (corpore longioribus) porrectis, expan-
sis, vibratisq viam explorans, praedae intentus. Totus ferrugineus
est: abdomen a tergo lineis transversis distinctum, quas, inter-
secat medias linea una pallidior longitudinalis: subtus in medio
ventre macula pallescens.

[p. 616.]

PHALANGIUM OPILIO

The Shepherd-Spider, or Carter, or Long-legs,
or Harvest-Spider

Pedibus longissimis, tenuissimis; post frontem verrucula, cujus
apex in duplicem cristam spinularum abit; corpus subcrustaceum
incisurâ nullâ; maribus cornicula praelonga, pedes magis fusci.
Fæminæ Augusto mense gravidæ. Frequens in pratis, hortisq
(Ray) culices & muscas prædatur. Abdomen subtus segmentis
4, s. 5; supra indivisum, spinulis sive denticulis sparsis (uti &
 thorax) asperum. In medio thorace tuberculum eminens, duplici
spinarum serie cristatum, oculos laterales (utrinque unum) sus-
tinet: nec plures ego, nec Geoffrœus, nec Scopolus, vidimus. In
fronte brachia 2, corpore toto longiora (cum extendantur), ex
unico articulo præter basin constantia, apice acuto, manus sive
chelas inflexas, longissimas, teretes, subventricosas sustinente pol-
lace mobili, digito fixo, omnino ut in Cancris plerisque: digiti
subæquales apice nigri; palpi 2 pediformes, articulis 5, ut in
Araneis. Igitur a Cancris distinguitur palpis pediformibus, oculis

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**THE POET GRAY**

*in tuberculo thoracis sitis, abdomine subgloboso, non inflexo; ab Araneis oculis 2, manibus chelatis.*

[p. 618.]

**ARANEA**

*The Spider*

[The first sentence of the following passage is from Linnaeus, the rest is added by Gray.]


**VERMES. MOLLUSCA**

**ASTERIAS OPTIURA**

*The Sea-Scorpion of Barbadoes*

Læge—*stellæ orbiculata, squamosæ* (F. Suec.). Ad Hartlepool non infrequens a piscatoribus in pelago capitur, dum escas in hamo, ut No. 2, arrodit, in littore nunquam inveni. Corpus parvum, planum, figura subinde mutabili, (nunc enim orbiculatum, nunc pentagonum, nunc 5-lobum) tactu asperum: squamas ne

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lente quidem distinguo, sed tubercula potius minutissima, conferta: color sanguineus centro lutescente. Radii concolores 5, longi, aculeorum ordinibus 6 utrinq ciliati; aculei pallide flavescentes, duriuscoli, obtusi; e sulco longitudinali sub radiis singulis tentaculainnumera vivens exserit, ut No. 2. Radii omnes e vertebris osseis miro artificio junctis compositi, quos motu serpentino in omnem partem torquet, & moriens sæpe ipsa frangit, abjicitq, ut Cancer chelas. [p. 662.]

VERMES. TESTACEA

Ostrea maxima

The Scallop


Ostrea edulis

The Oyster

L'Ostrica in Corsica, nelle spiagge d'Ancona e in quelle di Chi ozza è molto conosciuta, perchè in questi due mari n'è maggior copia che in altri luoghi. In Venetia se ne trovano quasi tutto l'anno (B. Scappi). Mense Junio prægnans ovulis, initio Au gusti vivos foetus parit: sine coitu genus propagat (Baster. Sub sec. 1, p. 31). Ostrea recens nata, tenella, celerrime natat, undu-
THE POET GRAY


[p. 699.]

TURBO LITTOREUS

The Whelk or Periwinkle


[p. 761.]

PATELLA PELLUCIDA

PATELLA forte eadem, quam semel ad Hartlepool inveni. Li-vida erat, obovata, gibba, supra subopaca: vertex lævis, margini postico propior, subrecurvus, apice tamen non libero, nee in mucronem assurgente: ex hoc lineæ 4 cæulescentes antrorum

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The Poet Gray

...
Voluta Liceraria. M.° 506. (Rumphius)
(fusiforme)

359. glabra, nitida, ponderosa.
ducuntur, subinde interruptae: utrinq autem lineolae similes 8, s. 10 (testa luci apposita) pellucent: subtus tota caeruleo-nitens pro situ variabilis; margine dilatato planiusculo, in sinum postice retuso, labiato. Diametrum longius, 10 lin. \( \frac{1}{2} \). Vidi etiam minorem, membranaceam, absque vertice, pallidam, radiis 4 tantum caeruleis. An varietas?  

[\( p. \ 783. \)]
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