# J. H. EMERTON



THE STRUCTURE
AND HABITS
OF SPIDERS



# J. H. Emerton

# The Structure and Habits of Spiders

EAN 8596547144410

DigiCat, 2022

Contact: <u>DigiCat@okpublishing.info</u>



# TABLE OF CONTENTS

| PREFACE.                                     |
|--|
| <b>CHAPTER I. ANATOMY AND CLASSIFICATION</b> |
| <u>LEGS.</u>                                 |
| PALPI.                                       |
| MANDIBLES.                                   |
| ABDOMEN.                                     |
| INTESTINE.                                   |
| HEART.                                       |
| BREATHING-ORGANS.                            |
| NERVOUS SYSTEM.                              |
| POISON-GLANDS.                               |
| CLASSIFICATION.                              |
| <u>MYGALIDÆ</u>                              |
| DYSDERIDÆ.                                   |
| DRASSIDÆ.                                    |
| AGALENIDÆ.                                   |
| <u>CINIFLONIDÆ.</u>                          |
| LYCOSIDÆ.                                    |
| ATTIDÆ.                                      |
| THOMISIDÆ.                                   |
| THERIDIIDÆ.                                  |
| EPEIRIDÆ.                                    |
| CHAPTER II. EATING AND BITING.               |
| CHAPTER III. SPINNING HABITS.                |
| SPINNERETS.                                  |

TRAP-DOOR NESTS.

**SILK TUBES AND NESTS.** 

**THE WATER-SPIDER.** 

**COBWEBS.** 

**ROUND WEBS.** 

**USE OF SPIDER'S SILK.** 

**CURLED WEBS.** 

THE TRIANGLE SPIDER.

**FLYING SPIDERS.** 

**CHAPTER IV. GROWTH OF SPIDERS.** 

PALPAL ORGANS.

THE EPIGYNUM.

USE OF THE PALPAL ORGANS AND EPIGYNUM.

LAYING EGGS.

**ESCAPE FROM THE COCOON.** 

PARASITES.

**GROWTH IN THE EGG.** 

**YOUNG SPIDERS.** 

**BOOKS ABOUT SPIDERS.** 

INDEX.

#### PREFACE.

#### Table of Contents

The object of this book is to give a plain account of the best known habits of spiders, and as much of their anatomy and classification as is necessary to understand these habits. The portion on the spinning and flying habits is copied chiefly from Blackwall and Menge; that on the trapdoor spiders from Moggridge; and the habits of Nephila and Hyptiotes, from Wilder. The observations of these authors have been repeated as far as possible, and some changes and additions made to their accounts of them. The numerous stories of deadly poison, supernatural wisdom, and enormous size and strength of spiders, have been omitted as doubtful. Several cuts from the papers of Professor Wilder have been repeated by favor of the author and publishers. Most of the figures are, however, new, and engraved by photography from my own drawings.

# LIST OF ILLUSTRATIONS.

### PAGE

| 1.  | Under Side of Epeira Vulgaris               | 15 |
|-----|---|----|
| 2.  | Foot of Epeira Vulgaris                     | 14 |
| 3.  | Foot of Attus Mystaceus                     | 15 |
| 4.  | Upper Side of Epeira Vulgaris               | 18 |
| 5.  | Section of Epeira Vulgaris                  | 20 |
| 6.  | Mygale Hentzii                              | 24 |
| 7.  | Dysdera Interrita and Eyes                  | 26 |
| 8.  | Drassus                                     | 26 |
| 9.  | Agalena Nævia                               | 27 |
| 10. | Lycosa and Eyes                             | 28 |
| 11. | Salticus and Eyes                           | 29 |
| 12. | Thomisus and Eyes                           | 30 |
| 13. | Theridion                                   | 31 |
| 14. | Mandibles of Epeira Vulgaris.<br>Front View | 33 |
| 15. | Claw of Mandible                            | 33 |
| 16. | Spinnerets of Epeira Vulgaris               | 39 |
| 17. | Single Spinning Tube                        | 40 |

| 18. | Spinning-Glands   | 40 |
|-----|---|----|
| 19. | Spinneret of Prosthesima  | 41 |
| 20. | Spinneret of Agalena with some of the hairs removed                   | 41 |
| 21. | End of Thread   | 42 |
| 22. | Trap-door Nests. Copied from<br>Moggridge                             | 47 |
| 23. | Nest of Dolomedes   | 52 |
| 24. | Web of Agalena  | 55 |
| 25. | Web of Linyphia Marmorata   | 57 |
| 26. | Web of Linyphia Communis  | 59 |
| 27. | Pholcus swinging  | 61 |
| 28. | Round Web of Epeira Vulgaris  | 62 |
| 29. | Web of Zilla  | 65 |
| 30. | Web of Nephila Plumipes. From<br>Wilder                               | 66 |
| 31. | Part of Web of Nephila, to show<br>the smooth threads. From<br>Wilder | 67 |
| 32. | Epeira Spinea   | 69 |
| 33. | Spinnerets of Amaurobius  | 72 |
| 34. | Calamistrum of Amaurobius   | 73 |

| 35.    | Dictyna spinning Curled Web                                    | 73        |
|--------|--|-----------|
| 36.    | Part of Web of Amaurobius                                      | 74        |
| 37.    | Part of Web of Dictyna, showing regular arrangement of threads | 75        |
| 38.    | Unfinished Web of Triangle<br>Spider. From Wilder              | 76        |
| 39.    | Finished Web of Triangle Spider, and Spider holding the Web.   |           |
|        | From Wilder  | 78        |
| 40.    | Young Lycosa flying  | 81        |
| 41.    | Flying Spider with a Thread attached to the Ground             | 84        |
| 42.    | Large Attus flying by a Brush of<br>Threads                    | 85        |
| 43.    | Male and Female Nephila<br>Plumipes. From Wilder,              |           |
|        | in Proceedings Boston Society<br>Natural History               | 78        |
| 44,45. | Heads of Males of Several<br>Species of Erigone                | 88,<br>89 |
| 46.    | Palpal Organ of Mygale   | 89        |
| 47.    | Palpal Organ of Epeira   | 90        |
| 48.    | Palpal Organ of Theridion                                      | 91        |

| 49. | Epigynum of Epeira Riparia                        | 92  |
|-----|---|-----|
| 50. | Epigynum of Theridion                             | 93  |
| 51. | Epigynum of Theridion                             | 94  |
| 52. | Copulation of Lycosa                              | 95  |
| 53. | Copulation of Linyphia                            | 96  |
| 54. | Copulation of Agalena                             | 96  |
| 55. | Copulation of Epeira Riparia                      | 97  |
| 56. | Drassus laying Eggs                               | 99  |
| 57. | Lycosa carrying Cocoon attached to her Spinnerets | 100 |
| 58. | Attus Mystaceus laying Eggs                       | 101 |
| 59. | Epeira Strix making Cocoon                        | 101 |
| 60. | Epeira Strix laying Eggs                          | 102 |
| 61. | Cocoon of Argyrodes hanging by a Stem             | 103 |
| 62. | Cocoon of Epeira Riparia. From<br>Wilder          | 103 |
| 63. | Eggs during Segmentation                          | 106 |
| 64. | Eggs further Advanced                             | 108 |
| 65. | Young Epeira Riparia after First<br>Moult         | 109 |

| 66. | Moulting of Nephila Plumipes.<br>From Wilder         |     |
|-----|--|-----|
|     | in Proceedings American<br>Association               | 111 |
| 67. | Nephila Plumipes just after<br>Moulting. From Wilder | 111 |