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# THE FOOD OF TROUT IN NEW SOUTH WALES.

1934-1935.

By KEITH C. McKEOWN

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THIS paper contains the results of the investigation into the food of trout in New South Wales carried out during the season 1934-1935, and gives details of the stomach contents of 83 Rainbow Trout (*Salmo irideus* Gibbons), 67 Brown Trout (*Salmo fario* Linnæus), and 8 Loch Leven Trout (*Salmo levenensis* Walker).

The earlier results of this investigation have been presented in two papers<sup>1</sup> which should be consulted by those interested in the conservation of trout.

Considerable interest in the investigation has been evidenced throughout New South Wales, Victoria, and New Zealand. In Victoria the need for, and the economic value of, such an investigation are becoming evident, and it is to be hoped that research will be carried out in other States along these lines.

When the present investigation was commenced no information was available with regard to the food of trout in Australia, although considerable research had been carried out in New Zealand, which was being applied in a practical manner in an endeavour to improve the conditions prevailing in the streams of the Dominion. We now know, subject to climatic and other variation, the principal insects and other animals constituting the food of our trout; this is a step in the right direction, but as the investigation has progressed it has become more and more apparent that the laboratory work must be correlated with field research. A quantitative survey of the principal trout streams is essential for the solution of a number of problems which have presented themselves during the course of the work. We know that certain insects are taken as food by the fish, but we do not know whether other insects, etc. are present in the streams but are distasteful to the trout, nor do we know the relations between those species which have been proved to be of value as fish food. Caddis are present in the streams in varying numbers through the season. At some periods the caddis constitute the most important food item, but they may suddenly decline in numbers in the stomachs, although individual fish may be still taking them in large numbers. At the periods of diminution in numbers of the caddis there is usually an increase in the quantity of terrestrial insects taken, e.g., Scarabæidæ. It is important to discover in this and other cases whether the fish have a preference for the beetles and abandon the caddis in their favour, or whether the change in food is due to some sudden decrease in the number of the caddis. This aspect is apparent in the case of other insects. This is but one problem among many, but the solution can be obtained only by careful research in the field, and definite conclusions of value to the future of the Australian trout streams arrived at by the correlation between laboratory and ecological methods. I feel that this aspect cannot be too strongly stressed.

<sup>1</sup>McKeown.—Notes on the Food of Trout and Macquarie Perch in New South Wales. Rec. Aust. Mus., xix, 2, (March 26, 1934), pp. 141-152, pl. xvii; The Food of Trout in New South Wales, 1933-1934. Rec. Aus. Mus., xix, 3, (September 28, 1934), pp. 184-213.

As in the past I am indebted to members of the New South Wales Rod Fishers' Society for their interest and assistance in the course of the work, and especially to Dr. A. J. Spiller Brandon, through whose untiring efforts we possess a more complete record of trout food from the Tuross River than from any other stream. My thanks are also due to Messrs. G. H. Montgomery, A. E. Church, F. W. Barrett, the Rev. W. A. Evans, and the Lithgow Trout Fishermen's Association, for their trouble in collecting material for examination.

It is to be regretted that material was not forthcoming from more districts this season, for there are many streams from which information is highly desirable.

The accompanying figures showing the comparison of the averages per fish of the aquatic and non-aquatic foods consumed by Brown and Rainbow Trout, are of considerable interest, but seem to show that there is little in the contention that the Brown Trout feeds more upon the surface, and consequently secures more water-borne terrestrial insects, etc., than the Rainbow Trout.

#### Comparison of the Average Number of Insects of each order taken by Rainbow and Brown Trout.

|                     | Aquatic. |          | Non-Aquatic. |          |
|---------------------|----------|----------|--------------|----------|
|                     | Brown.   | Rainbow. | Brown.       | Rainbow. |
| Coleoptera .....    | .19      | .29      | 8.64         | 6.75     |
| Hemiptera .....     | .5       | .2       | .4           | .32      |
| Hymenoptera .....   | ...      | ...      | 1.31         | 42.78    |
| Orthoptera .....    | ...      | ...      | .13          | 6.03     |
| Trichoptera .....   | 12.56    | 87.59    | ...          | ...      |
| Lepidoptera .....   | ...      | ...      | .12          | .1       |
| Odonata .....       | 1.6      | .76      | ...          | ...      |
| Ephemeroptera ..... | .47      | 1.4      | ...          | ...      |
| Diptera .....       | ...      | ...      | .31          | .66      |
| Perlaria .....      | .06      | *        | ...          | ...      |
| Thysanoptera .....  | ...      | ...      | ...          | .02      |
| Isoptera .....      | ...      | ...      | .31          | 1.6      |
| Archnida .....      | ...      | ...      | .1           | .14      |
| Vermes .....        | .1       | .07      | ...          | ...      |
| Mollusca .....      | ...      | .01      | ...          | ...      |
| Amphibia .....      | .06      | .14      | ...          | ...      |
| Reptilia .....      | ...      | ...      | .01          | .01      |
| Mammalia .....      | ...      | ...      | ...          | .01      |
| Crustacea .....     | .06      | 5.8      | ...          | ...      |
|                     | 15.6     | 96.24    | 11.33        | 58.42    |

Tables setting out the monthly distribution of food of Rainbow and Brown Trout for each locality are appended, and should be compared with those given in my previous paper<sup>2</sup>.

<sup>2</sup>The Food of Trout in New South Wales, 1933-1934. Rec. Aus. Mus., xix, 3 (September 23, 1934), pp. 184-213.

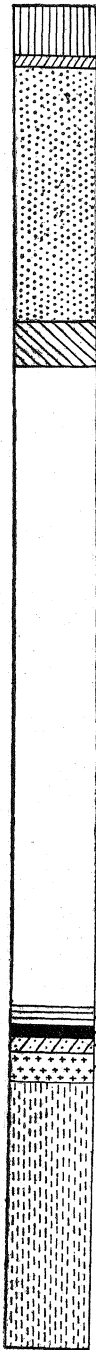
**Monthly Comparison of Stomach Contents of Rainbow Trout (*Salmo irideus* Gibbons).**

|                       | December.        |              |                       |               | January.         |              |                       |               | February.        |              |                       |               |
|-----------------------|------------------|--------------|-----------------------|---------------|------------------|--------------|-----------------------|---------------|------------------|--------------|-----------------------|---------------|
|                       | Duckmaloi River. | Badja River. | Little Manning River. | Tuross River. | Duckmaloi River. | Badja River. | Little Manning River. | Tuross River. | Duckmaloi River. | Badja River. | Little Manning River. | Tuross River. |
| Stomachs exd. ....    |                  | 13           |                       | 10            | 1                | 4            |                       | 6             |                  |              | 12                    | 15            |
| Coleoptera .....      |                  | 32           |                       | 200           | 3                | 18           |                       | 43            |                  |              | 39                    | 176           |
| Hemiptera .....       |                  | 8            |                       | 3             | ...              | 8            |                       | 2             |                  |              | 5                     | 12            |
| Hymenoptera .....     |                  | 5            |                       | 37            | ...              | 22           |                       | 3             |                  |              | 15                    | 3,488         |
| Orthoptera .....      |                  | 1            |                       | ...           | ...              | 1            |                       | ...           |                  |              | 4                     | ...           |
| Trichoptera .....     |                  | 575          |                       | 790           | ...              | 1,103        |                       | 64            |                  | 4,263        | ...                   | 114           |
| Lepidoptera .....     |                  | ...          |                       | 1             | ...              | ...          |                       | 1             |                  | 5            | ...                   | 1             |
| Odonata .....         |                  | 11           |                       | 7             | ...              | 3            |                       | 16            |                  | 6            | ...                   | 17            |
| Ephemeroptera .....   |                  | 36           |                       | 14            | ...              | 16           |                       | 2             |                  | 36           | ...                   | 1             |
| Neuroptera .....      |                  | ...          | No data.              | ...           | ...              | ...          | No data.              | ...           |                  | ...          | ...                   | ...           |
| Diptera .....         | No data.         | ...          | ...                   | 3             | ...              | 8            | ...                   | 2             |                  | ...          | ...                   | 24            |
| Thysanoptera .....    | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           | No data.         | ...          | ...                   | 1             |
| Perlaria .....        | 4                | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           |
| Isoptera .....        | ...              | ...          | No data.              | 1             | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | 136           |
| Miscellaneous Insects | *                | ...          | ...                   | *             | ...              | *            | ...                   | *             | ...              | ...          | ...                   | *             |
| Arachnida .....       | 2                | ...          | ...                   | 3             | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | 2             |
| Vermes .....          | ...              | ...          | ...                   | 1             | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           |
| Mollusca .....        | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           |
| Amphibia .....        | 1                | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | 10            |
| Reptilia .....        | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           |
| Mammalia .....        | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           |
| Crustacea .....       | ...              | ...          | ...                   | 1             | ...              | ...          | ...                   | ...           | ...              | ...          | ...                   | ...           |

**Monthly Comparison of Stomach Contents of Brown Trout (*Salmo fario* Linnaeus).**

|                       | December.        |               | January.         |               | February.        |               |
|-----------------------|------------------|---------------|------------------|---------------|------------------|---------------|
|                       | Duckmaloi River. | Tuross River. | Duckmaloi River. | Tuross River. | Duckmaloi River. | Tuross River. |
| Stomachs exd. ....    | 15               | 14            |                  | 13            |                  | 17            |
| Coleoptera .....      | 62               | 243           |                  | 12            |                  | ...           |
| Hemiptera .....       | 5                | 4             |                  | 17            |                  | ...           |
| Hymenoptera .....     | 25               | 5             |                  | 47            |                  | ...           |
| Orthoptera .....      | 6                | 1             |                  | 1             |                  | ...           |
| Trichoptera .....     | 24               | 112           |                  | 107           |                  | 574           |
| Lepidoptera .....     | 3                | 1             |                  | 1             |                  | 2             |
| Odonata .....         | 22               | 34            |                  | 20            |                  | 23            |
| Ephemeroptera .....   | 17               | 4             | No data.         | 6             | No data.         | 4             |
| Neuroptera .....      | ...              | ...           | ...              | ...           | ...              | 1             |
| Diptera .....         | 1                | 5             | ...              | 3             | ...              | 5             |
| Perlaria .....        | ...              | 3             | No data.         | ...           | No data.         | 1             |
| Isoptera .....        | ...              | 1             | ...              | 20            | ...              | ...           |
| Miscellaneous Insects | *                | *             | ...              | *             | ...              | *             |
| Arachnida .....       | 4                | 1             | ...              | 1             | ...              | ...           |
| Vermes .....          | 1                | 2             | ...              | 1             | ...              | 3             |
| Amphibia .....        | ...              | 1             | ...              | 2             | ...              | ...           |
| Reptilia .....        | 1                | ...           | ...              | ...           | ...              | ...           |
| Crustacea .....       | ...              | ...           | ...              | 2             | ...              | 2             |

The accompanying graph sets out the proportions of each of the principal foods taken by Rainbow and Brown Trout, and is based on an average of the contents of all stomachs examined during the period 1931 to 1935. Although the basis of computation, *i.e.*, that of the number of individuals of each class consumed, is not wholly satisfactory, yet it presents the numerical proportions of these foods in a striking manner.



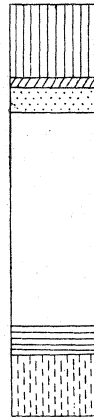
Coleoptera (Beetles).  
 Hemiptera (Bugs, etc.).  
  
 Hymenoptera (Ants, etc.).  
  
 Orthoptera (Grasshoppers, etc.).

Trichoptera (Caddisflies).

Odonata (Dragonflies)  
 Ephemeroptera (Mayflies)  
 Isoptera (Termites)  
 Crustacea.

Other food.

RAINBOW TROUT.



Coleoptera.  
 Hemiptera (Bugs, etc.).  
 Hymenoptera (Ants, etc.).

Trichoptera (Caddisflies).

Odonata (Dragonflies).

Other food.

BROWN TROUT.

FOOD OF TROUT.

A number of orders were eaten in such small quantities that it is impossible to show them on a graph of this scale, and it has been necessary to combine them under the section "Other food."

A most striking feature emphasised by the graph is the small amount of food consumed by the average Brown Trout in comparison with that eaten by the average Rainbow Trout. This factor has been strongly in evidence throughout the investigation.

The following notes are of value as illustrating the climatic and other conditions on the streams from which the fish were secured.

#### **Duckmaloi River.**

The Duckmaloi River is about 104 miles from Sydney, 10 miles from Hampton, New South Wales. The banks are clothed with tea tree scrub, but this has been partially cleared in many places in which the fish were taken. Weather in December was wet, but fine weather prevailed in January.

#### **Badja River.**

The season on the Badja opened with very cold and unsettled weather, but after two or three days it cleared, but remained changeable for some time. From then onwards until about the middle of December there was wonderful fishing. Mr. S. N. Stewart reports that the fishing has not been better for the past fifteen or sixteen years, and there were more big fish caught this season than in any other season that he can remember. This, in his opinion, was due to floods having cleared out all weeds, with the result that the fish had to work for their living, a big proportion of their food supply, which they obtained from the weeds, having gone. During January easterly fogs were experienced which spoil the fishing, and decent fish were landed only towards the close of the afternoon. During the whole of the season the Badja was never down to normal, owing to wet weather. Near the end of the season, during Easter, more heavy rain was experienced.

#### **Little Manning River.**

Note by Mr. G. H. Montgomery.—"To-day I have left a jar of Trout stomachs (all Rainbows), which I collected from the Little Manning River (local name Gummi River), Barrington Tops. All these fish were in excellent condition, there being an abundance of feed about, yet, strange to relate, no fish were taken over 3 lb. in weight. Further, I did not notice so many yabbies (crayfish) in the stomachs. There seemed to be a greater proportion of females taken this year than last year."

#### **Tuross River.**

Note by Dr. A. J. Spiller Brandon.—"A second bottle of stomachs, bringing us up to the above date (20th February, 1935), is now filled. It was late in December that the collection started, and for three weeks I had the able assistance of Mr. W. H. Ifould. When we arrived on the Tuross late in December the tea tree was just coming into full bloom, and consequently the tea tree beetle was very much in evidence, but just after Christmas the Christmas beetle, or what I have always known as the Cockchafer, made its appearance in large numbers and was falling

into the water from the overhanging trees in great quantities. The fish seemed to be enjoying themselves on these, and it is marvellous that they took the artificial fly at all. About the end of January the tea tree had all gone to seed, and the beetles became very scarce. Usually at this time of the year the grasshopper becomes evident, but this year they are conspicuous by their absence. About the end of February a small black fly, which I have always known as a 'Smut,' made its appearance in great quantities, and the fish were feeding on them ravenously; this was particularly so on 16th, 17th, and 18th February. There is one stomach that is labelled 'Murphy's'; this was taken from a portion of the pool devoid of overhanging trees or scrub, and it will be interesting to know whether this fish was obtaining beetles that had floated down from the timbered country or was feeding on caddis. During the period there were one or two freshes in the river, but these have been noted on the cards."

### Stomach Contents of Rainbow Trout.

(*Salmo irideus* Gibbons.)

#### Duckmaloi River.

No. 1.—♂,  $\frac{3}{4}$  lb.; 26 January, 1935. Collected by Mr. A. E. Church. Coleoptera : 3 Dryopid larvæ. Miscellaneous : A small quantity of gravel.

#### Big Badja River.

No. 2.—♀, 6 lb.; 27 December, 1934. Collected by Rev. W. A. Evans.—Coleoptera : 10 large water beetles (*Homodytes scutellaris*). Trichoptera : 75 caddis-cases (sand), 6 large caddis-cases (stick). Odonata : 2 Zygopterid nymphs. Miscellaneous insects : 6 aquatic larvæ? Mammalia : leg-bones of small mammal (? mouse).

No. 3.—♀,  $1\frac{1}{2}$  lb.; 1 January, 1935. Collected by Rev. W. A. Evans.—Coleoptera : 1 *Lagria grandis*, 1 Longicorn beetle (*Ancita crocogaster*), 2 *Diphucephala* sp., 3 *Heteronyx* sp., and a large quantity of coleopterous remains. Hemiptera : 1 cicada (*Melampsalta encausta*) ♂, 2 *Corixa* sp. Hymenoptera : 5 winged ants (? gen. et. sp.). Diptera : 1 Stratiomyid fly (? gen. et. sp.), and a quantity of triturated dipterous remains. Trichoptera : 312 caddis-cases (sand).

No. 4.—♂,  $1\frac{1}{4}$  lb.; 1 January, 1935. Collected by Rev. W. A. Evans.—Coleoptera : 1 *Phyllotocus navicularis*, and a small quantity of coleopterous remains. Hemiptera : 1 water bug (*Sphaerodema* sp.). Hymenoptera : 7 bees (*Hylæus* sp.), 1 bee (? gen. et. sp.). Trichoptera : 6 caddis-cases (sand), 1 large caddis-case (stick). Odonata : 1 Anisopterid nymph. Diptera : a small quantity of remains.

No. 5.—♀, 3 lb.; 1 January, 1935. Collected by Rev. W. A. Evans.—Coleoptera : 1 *Phyllotocus navicularis*. Hemiptera : 2 *Corixa* sp. Hymenoptera : 1 bee (*Hylæus* sp.), 1 Bulldog ant (*Myrmecia gulosa*). Trichoptera : 537 caddis-cases (sand). Diptera : 1 March fly (*Tabanus* sp.).

- No. 6.—♀, 1½ lb.; 1 January, 1935. Collected by Rev. W. A. Evans. Coleoptera : 3 *Phyllotocus navicularis*, 2 *Heteronyx* sp., 1 *Lagriá grandis*, 1 *Cadmus litigiosus*, 1 Tenebrionid beetle (*Adelium* sp.), 1 Longicorn beetle (*Macrones* sp.), and a quantity of coleopterous remains. Hemiptera : 2 Pentatomid bugs (? gen. et sp.) Hymenoptera : 3 bees (*Hylæus* sp.), 2 Ichneumon wasps (? gen. et sp.), 1 Thynnid wasp ♂ (? gen. et sp.), 1 bee (*Apis mellifica*). Orthoptera : 1 immature Acridiid (? gen. et sp.). Trichoptera : 247 caddis-cases (sand). Odonata : 2 Anisopterid nymphs. Ephemeroptera : 16 mayflies and quantity of remains. Diptera : 5 Stratiomyid flies (*Odontomyia* sp.) 4 ♂, 1 ♀, 1 Leptid fly (? gen. et sp.). Miscellaneous insects : quantity of finely divided insect remains.
- No. 7.—? sex, 7 lb.; November, 1934. Collected by Mrs. Drysdale.—Coleoptera : elytra of Tenebrionid beetle (? gen. et sp.). Mollusca : 1 *Bullinus* sp.
- No. 8.—? sex, ? weight; December, 1934. Collected by Mr. F. W. Barrett. Coleoptera : 2 *Paropsis* sp., 3 Soldier beetles (*Telephorus pulchellus*), 1 Ladybird beetle (*Leis conformis*), 1 Tenebrionid beetle (? gen. et sp.), 1 *Diphucephala* sp. Trichoptera : 50 caddis-cases (sand). Odonata : 2 Anisopterid nymphs. Perlaria : wings of Stone-flies. Ephemeroptera : 1 mayfly. Miscellaneous insects : small quantity of triturated insect remains.
- No. 9.—♀, ¾ lb.; December, 1934. Collected by Mr. F. W. Barrett.—Trichoptera : 2 caddis-cases (sand), 1 caddis-case (reed). Odonata : 1 large Anisopterid nymph. Araneidæ : 1 spider (*Araneus* sp.).
- No. 10.—? sex, 1¼ lb.; December, 1934. Collected by Mr. F. W. Barrett.—Coleoptera : 1 *Lagriá grandis*, 1 Click beetle (Elateridæ; ? gen. et sp.), 4 *Cryptocephalus* sp., 1 *Liparetrus* sp. Hemiptera : 1 Jassid (? gen. et sp.). Hymenoptera : 2 Bulldog ants (*Myrmecia gulosa*). Trichoptera : 100 caddis-cases (sand). Ephemeroptera : 28 mayflies and remains of numerous others. Diptera : 3 Bibionid flies, 1 fly (Syrphidæ). Miscellaneous insects : quantity of remains. Araneidæ : 1 spider (*Araneus* sp.).
- No. 11.—♂, 4 lb.; December, 1934. Collected by Mr. F. W. Barrett.—NOTE.—Completely empty.
- No. 12.—♀, ¾ lb.; December, 1934. Collected by Mr. F. W. Barrett.—Trichoptera : 4 caddis-cases (sand). Odonata : 1 Anisopterid nymph, wings of Zygopterid dragonflies. Ephemeroptera : 3 may-flies. Miscellaneous insects : small quantity of broken insect remains. Miscellaneous : 1 feather.
- No. 13.—♂, 1¼ lb.; December, 1934. Collected by Mr. F. W. Barrett.—105 caddis-cases (sand).
- No. 14.—♀, 1½ lb.; December, 1934. Collected by Mr. F. W. Barrett.—Coleoptera : 1 *Phyllotocus navicularis*, 1 *Berosus* sp. Hemiptera : 1 cicada (*Melampsalta* sp.). Hymenoptera : 1 Bulldog ant (*Myrmecia gulosa*), 2 ants (*Iridomyrmex* sp.). Trichoptera : 1 caddis nymph. Odonata : wings of Anisopterid dragonflies, 1 Anisopterid nymph. Ephemeroptera : 1 mayfly.
- No. 15.—? sex, 1¾ lb.; December, 1934. Collected by Mr. F. W. Barrett.—Coleoptera : 1 *Phyllotocus navicularis*. Trichoptera : 83 caddis-cases. Ephemeroptera : 1 mayfly.



- No. 16.—? sex, 3 lb.; December, 1934. Collected by Mr. F. W. Barrett.—Coleoptera : 1 Gyrinid beetle (*Macrogyrus australis*), 1 Dytiscid beetle (*Hyderodes shuckhardi*). Trichoptera : 19 caddis-cases.
- No. 17.—♀, 2 $\frac{3}{4}$  lb.; December, 1934. Collected by Mr. F. W. Barrett.—Trichoptera : 92 caddis-cases. Miscellaneous : piece of wood,  $\frac{3}{4}$  x  $\frac{1}{4}$  inches.
- No. 18.—? sex, 1 $\frac{1}{2}$  lb.; December, 1934. Collected by Mr. F. W. Barrett.—Trichoptera : 12 caddis-cases (sand). Ephemeroptera : 1 mayfly.
- No. 19.—? sex, 2 $\frac{1}{3}$  lb.; 23 December, 1934. Collected by Mr. F. W. Barrett.—Coleoptera : 1 Carab beetle (? gen. et sp.). Hemiptera : 6 *Corixa* sp. Orthoptera : 1 cockroach (*Panesthia granicollis*). Trichoptera : 21 caddis-cases (sand), 4 caddis-cases (stick). Odonata : 2 Zygopterid dragonflies (imagines), head of Anisopterid dragonfly, 1 Anisopterid nymph. Ephemeroptera : 1 mayfly. Vermes : 1 Gordian worm. Amphibia : bones of frog.

#### Power Creek.

- No. 20.—♀, 1 $\frac{1}{2}$  lb.; December, 1934. Collected by Mr. F. W. Barrett.—Trichoptera : 2 caddis-cases (sand).
- No. 21.—♂, 1 $\frac{1}{2}$  lb.; December, 1934. Collected by Mr. F. W. Barrett.—Coleoptera : 1 water beetle (*Berosus* sp.). Hemiptera : 1 Jassid (? gen. et sp.), 1 *Naucoris australasicus*? Trichoptera : 47 caddis-cases (sand), 10 caddis-cases (stick). Odonata : 1 Anisopterid nymph. Diptera : 3 Crane flies (? gen. et sp.) (imagines), 2 Stratiomyid flies (*Odontomyia carinifacies*). Miscellaneous insects : small quantity of broken insect remains.
- No. 22.—♂, 2 $\frac{1}{4}$  lb.; December, 1934. Collected by Mr. F. W. Barrett.—Trichoptera : 141 caddis-cases (sand), 2 caddis-cases (stick). Ephemeroptera : 1 very small mayfly nymph.

#### Counteguany Creek.

- No. 23.—♀, 2 lb.; 20 December, 1934. Collected by Rev. W. A. Evans.—Coleoptera : head of Hydrophilid larva. Trichoptera : 23 large caddis-cases (stick).
- No. 24.—♂, 3 $\frac{1}{2}$  lb.; 20 December, 1934. Collected by Rev. W. A. Evans.—Coleoptera : 78 *Phyllotocus navicularis* and a large quantity of remains. Hymenoptera : 1 bee (*Hylæus* sp.). Trichoptera : 1 caddis-case (sand).
- No. 25.—♀, 1 $\frac{1}{2}$  lb.; 20 December, 1934. Collected by Rev. W. A. Evans.—Trichoptera : 7 caddis-cases (stick), 9 caddis-cases (sand). Miscellaneous : 1 feather. Vegetable matter : a quantity of leaves and vegetable debris.
- No. 26.—♀, 1 $\frac{1}{2}$  lb.; 1 January, 1935. Collected by Rev. W. A. Evans.—Coleoptera : 5 *Phyllotocus navicularis* and broken remains of others. Trichoptera : 6 caddis-cases (sand). Odonata : 1 Zygopterid dragonfly (imago). Ephemeroptera : 9 may-flies and a large quantity of remains. Miscellaneous : 1 feather, 2 large quartz pebbles.
- No. 27.—? sex, 3 $\frac{1}{4}$  lb.; December, 1934. Collected by Mr. F. W. Barrett.—Coleoptera : 5 *Phyllotocus navicularis*.

## Little Manning River.

- No. 28.—♂, 1½ lb.; 2 February, 1935. Collected by Mr. G. H. Montgomery.—Fly : *Invicta*. Coleoptera : 1 Dryopid larva. Trichoptera : 334 caddis-cases (sand). Ephemeroptera : 1 mayfly nymph.
- No. 29.—♀, 12 oz.; 2 February, 1935. Collected by Mr. G. H. Montgomery.—Fly : Red Tag Governor. Trichoptera : 73 caddis-cases (sand), 1 caddis fly (imago). Odonata : wings of Zygopterid dragonflies. Ephemeroptera : 1 mayfly nymph.
- No. 30.—♂, 12 oz.; 2 February, 1935. Collected by Mr. G. H. Montgomery.—Fly : Red Tag Governor. Trichoptera : 212 caddis-cases (sand). Ephemeroptera : wing of mayfly.
- No. 31.—♀, 1 lb.; 2 February, 1935. Collected by Mr. G. H. Montgomery.—Fly : *Invicta*. Coleoptera : 6 Soldier beetles (*Telephorus pulchellus*), 1 Click beetle (*Crepidomenus* sp.), 1 Dytiscid beetle (? gen. et sp.), 1 Dung beetle (*Onthophagus granulatus*), 6 Chrysomelid beetles (? gen. et sp.). Hymenoptera : 1 winged and ♂ (*Myrmecia* sp.). Orthoptera : 1 Acridiid (immature). Lepidoptera : 2 moths (? gen. et sp.). Odonata : mask of Anisopterid nymph. Miscellaneous insects : small quantity of unidentifiable insect remains. Vegetable matter : quantity of vegetable matter.
- No. 32.—♂, 1 lb.; 2 February, 1935. Collected by Mr. G. H. Montgomery.—Fly : Red Tag Governor. Coleoptera : 1 small Dytiscid beetle (? gen. et sp.). Trichoptera : 57 caddis-cases (sand). Odonata : 1 Anisopterid nymph. Crustacea : 10 ? Pontogeneidæ, near *Atyloides*. Vegetable matter : large quantity of Algæ.
- No. 33.—♂, 17 oz.; 3 February, 1935. Collected by Mr. G. H. Montgomery.—Fly : March Brown. Coleoptera : 2 *Diphucephala elegans*, 1 Click beetle (Elateridæ; *Crepidomenus* sp.), 1 weevil (*Balaninus* sp.), 1 *Heteronyx* sp., 1 *Cryptocephala* sp. Hymenoptera : 3 Thynnid wasps (? gen. et sp.) 2 ♂, 1 ♀. Orthoptera : 2 immature Acridiidæ. Trichoptera : 121 caddis-cases (sand), 1 caddis-case (stick). Ephemeroptera : 2 may-flies. Diptera : 3 flies (? gen. et sp.). Miscellaneous insects : quantity of insect remains. Vegetable matter : quantity of vegetable matter.
- No. 34.—? sex, 1 lb.; 3 February, 1935. Collected by Mr. G. H. Montgomery.—Fly : Alexandria. Coleoptera : 1 weevil (? *Balaninus* sp.). Hymenoptera : 5 winged ants (? gen. et sp.). Trichoptera : 1 caddis-fly, 7 caddis-cases (sand). Odonata : wings of Zygopterid dragonfly. Ephemeroptera : 4 mayfly, 4 mayfly nymphs. Araneidæ : 1 spider (*Epeira* sp.). Miscellaneous : quantity of sand and gravel.
- No. 35.—♀, 1 lb. 6 oz.; 3 February, 1935. Collected by Mr. G. H. Montgomery. Fly : March Brown. Coleoptera : 2 *Heteronyx*. Trichoptera : 723 caddis-cases (sand). Ephemeroptera : 1 mayfly. Miscellaneous insects : small quantity of finely broken insect remains.
- No. 36.—♂, ¾ lb.; 5 February, 1935. Collected by Mr. G. H. Montgomery.—Trichoptera : 181 caddis-cases (sand). Crustacea : 67 Pontogeneidæ near *Atyloides*.

- No. 37.—♀, 2½ lb.; 5 February, 1935. Collected by Mr. G. H. Montgomery.—Fly : Hare's Ear. Coleoptera : 2 Fire-fly beetles (*Lampyridæ*; ? gen. et sp.). Hemiptera : 1 Reduviid bug (? gen. et sp.). Hymenoptera : 3 winged ants (? gen. et sp.), 1 Honey-bee (*Apis mellifica*). Trichoptera : 770 caddis-cases (sand), 3 caddis-cases (stick). Lepidoptera : 2 moths (? gen. et sp.). Odonata : quantity of wings of Anisopterid dragonflies. Ephemeroptera : 2 mayflies, 2 mayfly nymphs. Diptera : 1 large Asilid fly (*Neoaratus* sp.). Araneidæ : 1 spider (*Araneus* sp.).
- No. 38.—♀, 13 oz.; 7 February, 1935. Collected by Mr. G. H. Montgomery.—Coleoptera : 1 *Figulus regularis*, 1 Chrysomelid beetle (? gen. et sp.), 4 *Diphucephala elegans*, and a quantity of coleopterous remains. Trichoptera : 730 caddis-cases (sand). Vegetable matter : quantity of Algæ.
- No. 3ö.—♀, 1½ lb.; 8 February, 1935. Collected by Mr. G. H. Montgomery.—Fly : Hardy's Favourite. Coleoptera : head of Longicorn beetle (? gen. et sp.). Trichoptera : 7 caddis-cases (stick), 3 caddis-cases (sand). Odonata : 2 Anisopterid dragonflies (imagines). Vermes : 4 Gordian worms.
- No. 40.—♂, 1 lb.; 8 February, 1935. Collected by Mr. G. H. Montgomery.—Fly : Barnwell Glory. Coleoptera : 2 Dryopid larvæ, 2 Fire-fly beetles (*Lampyridæ*; ? gen. et sp.). Hemiptera : 1 Reduviid bug (? gen. et sp.). Trichoptera : 117 caddis-cases (sand). Ephemeroptera : 1 mayfly nymph.
- No. 41.—♀, 12 oz.; 8 February, 1935. Collected by Mr. G. H. Montgomery.—Hemiptera : 1 Reduviid bug (? gen. et sp.). Trichoptera : 128 caddis-cases (sand), 1 caddis-case (stick). Araneidæ : 1 spider (*Araneus* sp.). Vegetable matter : quantity of Algæ.
- No. 42.—♂, 18 oz.; 9 February, 1935. Collected by Mr. G. H. Montgomery.—Trichoptera : 22 caddis-cases. Odonata : 1 Anisopterid nymph. Ephemeroptera : 17 mayfly nymphs. Vegetable matter : large mass of Algæ.
- No. 43.—♂, 12 oz.; 9 February, 1935. Collected by Mr. G. H. Montgomery.—Trichoptera : 430 caddis-cases (sand).
- No. 44.—♂, 12 oz.; 10 February 1935. Collected by Mr. G. H. Montgomery.—Hemiptera : 1 Pentatomid bug (*Cermatulus nasalis*), 3 *Corixa* sp. Hymenoptera : 1 winged ant (*Iridomyrmex* sp.). Trichoptera : 85 caddis-cases (sand). Diptera : 4 Chironomid midges. Thysanoptera : 1 *Idolothrips spectrum*.
- No. 45.—♀, 14 oz.; 10 February 1935. Collected by Mr. G. H. Montgomery.—Coleoptera : 1 weevil (*Balaninus* sp.). Orthoptera : 1 immature Acridiid. Trichoptera : 160 caddis-cases (sand). Odonata : 1 Anisopterid dragonfly (imago), 1 Anisopterid nymph. Crustacea : 134 Pontogeneidæ near *Atyloides*.
- No. 46.—♀, 9 oz.; 10 February, 1935. Collected by Mr. G. H. Montgomery.—Trichoptera : 55 caddis-cases. Crustacea : 157 Pontogeneidæ near *Atyloides*.
- No. 47.—♀, 1¾ lb.; 10 February, 1935. Collected by Mr. G. H. Montgomery.—Vegetable matter : stomach crammed to capacity with a mass of green Algæ.
- No. 48.—♂, ? weight; 10 February, 1935. Collected by Mr. G. H. Montgomery. Coleoptera : 1 weevil (*Balaninus* sp.). Hemiptera : 1 Jassid (immature). Hymenoptera : 1 Thynnid wasp ♂ (? gen. et sp.). Orthoptera : 1 Acridiid (immature). Trichoptera : 32 caddis-cases (sand). Lepidoptera : 1 moth (? gen. et sp.). Diptera : 1 fly (? gen. et sp.). Arachnida : 1 Pseudoscorpion (? gen. et sp.). Amphibia : bones of a frog. Crustacea : 112 Pontogeneidæ ? near *Atyloides*.

## Tuross River.

- No. 49.—♀, 1 lb.; 24 December, 1934, 2 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Red Cocky. Coleoptera: 3 *Phyllotocus navicularis*. Hymenoptera: 2 Saw-flies (*Perga ferruginea*). Trichoptera: 127 caddis-cases (sand), 2 caddis-cases (stick). Odonata: wings of Zygopterid dragonflies. Diptera: 1 Stratiomyid fly (*Odontomyia* sp.).
- No. 50.—♀, 1 lb.; 26 December, 1934, 5.30 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Red Palmer. Coleoptera: 1 *Heteronyx*. Hymenoptera: 1 Eumenid wasp (? gen. et sp.). Trichoptera: 23 caddis-cases (sand), 1 caddis-case (stick).
- No. 51.—♀, 2 lb.; 27 December, 1934, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Black Hackle. Coleoptera: 1 Tenebrionid beetle (*Adelium* sp.). Trichoptera: 24 caddis-cases (sand), 16 caddis-cases (stick). Odonata: 4 Zygopterid dragonflies (imagines). Diptera: 1 Bibionid fly. Crustacea: 1 Yabbie (*Parachceraps bicarinatus*). Miscellaneous: 1 feather.
- No. 52.—♀, 1 lb.; 28 December, 1934, 11.45 a.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Black Hackle. Coleoptera: 1 *Diphucephala* sp., 1 *Cryptocephalus* sp. Hemiptera: 1 *Corixa* sp. Hymenoptera: 4 winged ants (*Iridomyrmex* sp.). Trichoptera: 6 caddis-cases (sand). Ephemeroptera: 8 mayflies, 1 mayfly nymph. Araneidæ: 1 spider (*Araneus* sp.).
- No. 53.—♀, 1½ lb.; 28 December, 1934, 5 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Black Hackle. Coleoptera: 1 Christmas beetle (*Anoplognathus pectoralis*), 1 *Heteronyx* sp., 10 *Phyllotocus navicularis*, 1 Click beetle (Elateridæ; ? gen. et sp.). Hymenoptera: 2 bees (*Hylæus* sp.). Trichoptera: 11 caddis-cases (stick), 4 caddis-cases (sand). Odonata: 1 Agrionid dragonfly (imago). Ephemeroptera: 2 mayflies and remains of many others. Miscellaneous insects: quantity of finely triturated insect remains.
- No. 54.—♀, 1 lb.; 29 December, 1934, 5.30 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Red Cocky. Coleoptera: 16 *Heteronyx* sp., 15 *Phyllotocus navicularis*, 18 *Liparetrus* sp., 1 *Paropsis* sp., 3 Click beetles (Elateridæ; ? gen. et sp.), 27 Chrysomelid beetles (? gen. et sp.), 1 Longicorn beetle (*Phoracantha* sp.), 1 Tenebrionid beetle (? gen. et sp.). Hemiptera: 1 Tree-hopper (*Eurymela* sp.), 2 Pentatomid bugs (? gen. et sp.), 1 Jassid (? gen. et sp.). Hymenoptera: 13 bees (*Halictus* sp.), 1 Thynnid wasp ♀ (? gen. et sp.), 2 Saw-flies (*Perga* sp.). Trichoptera: 1 caddis-case (stick). Odonata: 1 Zygopterid dragonfly (imago). Ephemeroptera: remains of mayflies. Isoptera: 1 winged termite (? gen. et sp.). Miscellaneous insects: large quantity of finely triturated insect remains. Araneidæ: 1 spider (*Araneus* sp.). Vermes: 1 Gordian worm.
- No. 55.—♀, 1 lb.; 29 December, 1934, 5 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Red Cocky. Coleoptera: 1 *Phyllotocus navicularis*. Trichoptera: 566 caddis-cases (sand). Ephemeroptera: 2 mayflies. Araneidæ: 1 spider (*Araneus* sp.).

- No. 56.—♀, 1¼ lb.; 29 December, 1934, 6.30 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Red Cocky. Coleoptera: 1 Christmas beetle (*Anoplognathus pectoralis*), 18 *Phyllotocus navicularis*, 26 *Litochrus* sp., 10 Click beetles (Elateridæ; ? gen. et spp.), 2 *Cryptocephalus* sp., 1 Ladybird beetle (*Leis conformis*), 9 Chrysomelid beetles (? gen. et sp.), and a quantity of coleopterous remains. Hymenoptera: 8 bees (? *Hylæus* sp.). Trichoptera: 4 caddis-cases (sand). Odonata: 1 Zygopterid dragonfly (imago). Diptera: 1 large Asilid fly (? gen. et sp.). Miscellaneous insects: large quantity of finely divided and unidentifiable insect remains.
- No. 57.—♀, 2 lb.; 31 December, 1934, 7 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Black Hackle. Coleoptera: 1 Christmas beetle (*Anoplognathus pectoralis*), 9 *Phyllotocus navicularis*, 2 Dung beetles (*Onthophagus granulatus*), 1 Click beetle (Elateridæ; ? gen. et sp.), 5 Chrysomelid beetles (? gen. et sp.), 1 Soldier beetle (*Telephorus pulchellus*), 1 Paropsis larva. Hymenoptera: a wasp (*Sphex* sp.), 2 Thynnid wasps ♂ and ♀ (gen. et sp.). Lepidoptera: 1 moth (? gen. et sp.). Ephemeroptera: 1 mayfly. Miscellaneous insects: small quantity of insect remains.
- No. 58.—♀, 1 lb.; 31 December, 1934, 7.30 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Red Cocky. Coleoptera: 1 *Phyllotocus navicularis*. Hymenoptera: 1 winged ant (? gen. et sp.). Trichoptera: 5 caddis-cases (sand). Vegetable matter: Several fragments of green weed.
- No. 59.—♀, ? weight; 3 January, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 14 Christmas beetles (*Anoplognathus pectoralis*), 6 *Heteronychus* spp., 1 *Phyllotocus navicularis*. Trichoptera: 2 caddis-cases (stick).
- No. 60.—♀, 1¼ lb.; 7 January, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Black Hackle. Coleoptera: 3 Christmas beetles (*Anoplognathus pectoralis*), 1 Dytiscid beetle (*Rhantus pulverosus*), 2 Click beetles (Elateridæ; ? gen. et sp.), 1 Longicorn beetle (*Pempsamacra* sp.), 1 *Phyllotocus* sp., 3 Chrysomelid beetles (? gen. et sp.). Hemiptera: 2 *Corixa* sp. Hymenoptera: 1 Ichneumon wasp ♀ (*Lissopimpla semipunctata*), Head of Bulldog ant (*Myrmecia* sp.). Trichoptera: 7 caddis-cases (sand), 2 caddis-cases (stick). Lepidoptera: 1 moth (? gen. et sp.). Ephemeroptera: 1 mayfly. Miscellaneous insects: large quantity of finely broken and unidentifiable insect remains.
- No. 61.—♀, 2½ lb.; 15 January, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Black Hackle. Note: River falling after rise of 2 feet. Coleoptera: 4 *Phyllotocus navicularis*. Trichoptera: 25 caddis-cases (stick), 7 caddis-cases (sand).
- No. 62.—♀, 1 lb.; 25 January, 1935, 2 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Black Hackle. Coleoptera: 6 *Phyllotocus navicularis*, 1 Click beetle (Elateridæ; ? gen. et sp.). Hymenoptera: 1 Braconid wasp (? gen. et sp.). Trichoptera: 11 caddis-cases (sand). Odonata: 16 Zygopterid dragonflies (imagines). Diptera: 1 Robber fly (*Neoratus* sp.), 1 Bibionid fly (*Biblio* sp.).
- No. 63.—♀, 1½ lb.; 25 January, 1935, 8 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Pennell Hackle. Coleoptera: 1 Christmas beetle (*Anoplognathus pectoralis*). Trichoptera: 3 caddis-cases (stick).
- No. 64.—♀, ¾ lb.; 26 January, 1935, 12.30 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Black Hackle. Empty.

- No. 65.—♀, 2 lb.; 1 February, 1935, 11 a.m. Collected by Dr. A. J. Spiller Brandon.—Trichoptera: 7 caddis-cases (sand), 2 caddis-cases (stick). Ephemeroptera: 1 mayfly nymph. Miscellaneous: 1 quartz pebble.
- No. 66.—♂, 1 lb.; 3 February, 1935, 2.30 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Pennell Hackle. Trichoptera: 4 caddis-cases (sand). Ephemeroptera: 1 mayfly. Vegetable matter: a quantity of leaves and partly digested vegetable matter.
- No. 67.—♂, 1½ lb.; 9 February, 1935, 12.30 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Pennell Hackle. Coleoptera: 1 Longicorn beetle (*Disterna* sp.), 1 *Paropsis* larva. Hemiptera: 2 Jassids (? gen. et sp.). Trichoptera: 8 caddis-cases (sand). 3 caddis-cases (stick). Miscellaneous: 1 feather. Vegetable matter: quantity of leaves.
- No. 68.—♀, ? weight; 9 February, 1935, 5 p.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Pennell Hackle. Trichoptera: 6 caddis-cases (sand), 1 caddis-case (stick). Odonata: 1 large Agrionid dragonfly (imago), 1 Agrionid nymph, 1 Zygopterid nymph. Araneidæ: 1 spider (*Araneus* sp.). Vegetable matter: a quantity of Algæ.
- No. 69.—♀, 1 lb.; 11 February, 1935, 5 p.m. Collected by Dr. A. J. Spiller Brandon.—NOTE.—Fresh subsiding. Coleoptera: 1 weevil (*Belus* sp.), 1 *Heteronyx* sp. Trichoptera: 1 caddis-case (stick). Miscellaneous: small quantity of gravel. Vegetable matter: partly digested vegetable matter.
- No. 70.—♀, 1 lb.; 12 February, 1935, 11 a.m. Collected by Dr. A. J. Spiller Brandon.—NOTE.—River falling. Coleoptera: 53 *Heteronyx* sp., 1 *Figulus biliputana*, 1 *Paropsis* sp., 1 Carab beetle (*Xanthophea* sp.), 1 Christmas beetle (*Anoplognathus pectoralis*), 6 Chrysomelid beetles (? gen. et sp.), and quantity of unidentifiable remains. Hemiptera: 1 Tree-hopper (*Tartessus io*), 1 Tree-hopper (*Stenocotis caudata*). Hymenoptera: 1 winged Bulldog ant (*Myrmecia* sp.). Lepidoptera: 1 small moth (? gen. et sp.). Odonata: 3 Zygopterid dragonflies (imagines). Diptera: 1 Bibionid fly (? gen. et sp.), and quantity of dipterous remains. Amphibia: 1 small frog.
- No. 71.—♀, 1 lb.; 16 February, 1935, 11.5 a.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Pennell Hackle. Coleoptera: 8 *Heteronyx* sp. Hemiptera: 1 Tree-hopper (*Eurymela distincta*). Odonata: 1 Zygopterid dragonfly (imago). Diptera: head of fly. Miscellaneous insects: small quantity of finely divided insect remains.
- No. 72.—♀, 1 lb.; 16 February, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon.—Fly: Pennell Hackle. Amphibia: 5 frogs (1 large ♀).
- No. 73.—♀, 1 lb.; 17 February, 1935, 12.15 p.m. Collected by Dr. A. J. Spiller Brandon. Coleoptera: 7 *Heteronyx* sp. Hymenoptera: 8 winged ants (*Iridomyrmex* sp.). Trichoptera: 7 caddis-cases (sand), 2 caddis-cases (stick). Isoptera: 7 winged termites and quantity of remains.
- No. 74.—♀, 1¼ lb.; 17 February, 1935, 11 a.m. Collected by Dr. A. J. Spiller Brandon.—Coleoptera: 1 *Aphodius* sp., 2 *Heteronyx* sp., 2 *Paropsis* spp., 1 Longicorn beetle (*Hesthesis* sp.), 1 Longicorn beetle (near *Tessaromma*), 1 Clerid beetle (? gen. et sp.), 4 Chrysomelidæ (? gen. et sp.). Hemiptera: 3 Tree-hoppers (? gen. et sp.). Hymenoptera: 44 winged ants (*Iridomyrmex* sp.), 1 bee (*Halictus* sp.). Trichoptera: 4 caddis-cases (sand), 1 caddis-case (stick). Odonata: 2 Zygopterid dragonflies (imagines). Isoptera: 55 winged termites (*Coptotermes* sp.). Amphibia: 2 large frogs.

- No. 75.—♀, 1 lb.; 17 February, 1935, 11·30 a.m. Collected by Dr. A. J. Spiller Brandon.—Coleoptera: 1 Christmas beetle (*Anoplognathus pectoralis*), 2 *Aphodius* sp., 2 *Heteronyx* sp. Hymenoptera: 53 winged ants (*Iridomyrmex* sp.). Trichoptera: 6 caddis-cases (sand), 2 caddis-cases (stick). Miscellaneous insects: small quantity of insect fragments.
- No. 76.—♀, 1 lb.; 17 February, 1935, 1·30 p.m. Collected by Dr. A. J. Spiller Brandon.—Coleoptera: 1 Longicorn beetle (near *Tessaromma*), 1 Longicorn beetle (? gen. et sp.), 2 *Heteronyx* sp., and remains of others. Hymenoptera: 5 winged ants (*Iridomyrmex* sp.). Trichoptera: 2 caddis-cases (stick). Diptera: 8 Mycetophyllid midges. Araneidæ: 1 Spider (*Epeira* sp.). Amphibia: 1 small frog.
- No. 77.—♀, 1 lb.; 17 February, 1935, 1 p.m. Collected by Dr. A. J. Spiller Brandon.—Coleoptera: 11 *Aphodius* sp., 17 *Heteronyx* sp., 1 Click beetle (Elateridæ; ? gen. et sp.), 1 Soldier beetle (*Telephorus pulchellus*). Hemiptera: 4 Tree-hoppers (? gen. et sp.). Hymenoptera: 2,000 winged ants (*Iridomyrmex* sp.). Trichoptera: 4 caddis-cases (sand). Ephemeroptera: 1 mayfly nymph. Isoptera: 47 winged termites (*Coptotermes* sp.).
- No. 78.—♀, 1 lb.; 17 February, 1935, 2 p.m. Collected by Dr. A. J. Spiller Brandon.—Coleoptera: 29 *Heteronyx* sp., 1 Tenebrionid beetle (? gen. et sp.), 9 Chrysomelid beetles (? gen. et sp.). Hymenoptera: 1,297 winged ants (? *Iridomyrmex* sp.), 1 bee (*Halictus* sp.). Trichoptera: 23 caddis-cases (sand), 2 caddis-cases (stick). Diptera: 15 Mycetophyllid midges. Isoptera: 27 winged termites (*Coptotermes* sp.). Miscellaneous insects: very large quantity of finely broken and unidentifiable insect remains. Amphibia: bones of frog.
- No. 79.—♀, 1 lb.; 18 February, 1935, 11·15 a.m. Collected by Dr. A. J. Spiller Brandon.—Coleoptera: 1 *Paropsis* sp., 2 *Liparetrus* s.p., 1 *Cryptocephalus* sp. Hymenoptera: 76 winged ants ♂♂ and ♀♀ (? gen. et sp.), 1 bee (*Halictus* sp.), 1 Ichneumon wasp (? gen. et sp.). Trichoptera: 34 caddis-cases (sand), 4 caddis-cases (stick). Odonata: 8 Zygopterid dragonflies (imagines). Thysanoptera: 1 *Idolothrips spectrum*. Miscellaneous insects: quantity of broken insect remains.

#### Lithgow District.

- No. 80.—♀,  $\frac{1}{2}$  lb.; 26 December, 1934. Tarana Quarries. Collected by Lithgow Trout Fishermen's Association.—Vegetable matter: several short pieces of stick.
- No. 81.—♂,  $\frac{3}{4}$  lb.; 22 December, 1934. Sodwalls Creek. Collected by Lithgow Trout Fishermen's Association.—Trichoptera: 1 caddis-case (sand). Lepidoptera: 1 small lepidopterous larva. Odonata: 1 Zygopterid dragonfly (imago). Araneidæ: 1 small spider (*Araneus* sp.). Vegetable matter: quantity of Algæ.

#### Cotter River.

- No. 82.—? sex, 1 lb.; 11 April, 1935. Collected by Dr. Purchas and Mr. E. A. Clayton (per Mr. W. P. Bluett).—Orthoptera: 100 immature Acrididæ. Reptilia: 1 young lizard (*Amphibolurus* sp.). Vegetable matter: quantity of Algæ.

#### Mount Kosciusko.

- No. 83.—♀,  $6\frac{1}{4}$  lb.; February, 1935. Collected by Professor W. J. Dakin.—Orthoptera: 394 immature grasshoppers (Acrididæ; ? *Monistria* sp.).

Summary of Stomach Contents of Rainbow Trout (*Salmo irideus* Gibbons).

| Stomach No. ....                   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Coleoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Scarabaeidae .....                 | ... | ... | 5   | 1   | 1   | 5   | ... | ... | ... | 1   | ... | ... | ... | 1   |
| Elateridae .....                   | ... | ... | ... | ... | ... | 1   | ... | 4   | ... | 1   | ... | ... | ... | ... |
| Chrysomelidae .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4   | ... | ... | ... | ... |
| Curculionidae .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Dryopidae .....                    | 3   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Carabidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cleridae .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lampyridae .....                   | ... | ... | ... | ... | ... | ... | ... | 3   | ... | ... | ... | ... | ... | ... |
| Tenebrionidae .....                | ... | ... | ... | ... | ... | 1   | 1   | 1   | ... | ... | ... | ... | ... | ... |
| Dytiscidae .....                   | ... | 10  | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Gyrinidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cerambycidae .....                 | ... | ... | 1   | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| Coccinellidae .....                | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... |
| Hydrophilidae .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   |
| Lagridae .....                     | ... | ... | 1   | ... | ... | 1   | ... | ... | ... | 1   | ... | ... | ... | ... |
| <b>Hemiptera—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Pentatomidae .....                 | ... | ... | ... | ... | ... | 2   | ... | ... | ... | ... | ... | ... | ... | ... |
| Jassidae, etc. ....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| Naucoridae .....                   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Corixidae .....                    | ... | ... | 2   | ... | 2   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Reduviidae .....                   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cicadidae .....                    | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   |
| Belostomidae .....                 | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Hymenoptera—</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Formicidae .....                   | ... | ... | 5   | ... | 1   | ... | ... | ... | ... | 2   | ... | ... | ... | 3   |
| Apidae .....                       | ... | ... | ... | 8   | 1   | 4   | ... | ... | ... | ... | ... | ... | ... | ... |
| Ichneumonidae .....                | ... | ... | ... | ... | ... | 2   | ... | ... | ... | ... | ... | ... | ... | ... |
| Tenthredinidae .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Braconidae .....                   | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| Thynnidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Vespidæ, etc. ....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Orthoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Acrididae .....                    | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| Blattidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Trichoptera</b> .....           | ... | 81  | 312 | 7   | 537 | 247 | ... | 50  | 3   | 100 | ... | 4   | 105 | 1   |
| <b>Lepidoptera</b> .....           | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Odonata—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Anisoptera .....                   | ... | ... | ... | 1   | ... | 2   | ... | 2   | 1   | ... | ... | 1   | ... | 1   |
| Zygoptera .....                    | ... | 2   | ... | ... | ... | ... | ... | ... | ... | ... | ... | *   | ... | ... |
| <b>Ephemeroptera</b> .....         | ... | ... | ... | ... | ... | 16  | ... | 1   | ... | 28  | ... | 3   | ... | 1   |
| <b>Diptera—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Syrphidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| Tipulidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Mycetophyllidae .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Stratiomyidae .....                | ... | ... | 1   | ... | ... | 5   | ... | ... | ... | ... | ... | ... | ... | ... |
| Asilidae .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Leptidae .....                     | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| Bibionidae .....                   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3   | ... | ... | ... | ... |
| Tabanidae .....                    | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Unidentifiable .....               | ... | ... | *   | *   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Thysanoptera</b> .....          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Perlaria</b> .....              | ... | ... | ... | ... | ... | ... | ... | *   | ... | ... | ... | ... | ... | ... |
| <b>Isoptera</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Miscellaneous Insects</b> ..... | ... | *   | ... | ... | ... | *   | ... | *   | ... | *   | ... | ... | *   | ... |
| <b>Arachnida—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Araneidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | 1   | 1   | ... | ... | ... | ... |
| Pseudoscorpionidae .....           | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Vermes</b> .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Mollusca</b> .....              | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| <b>Amphibia</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Reptilia</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Mammalia</b> .....              | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Crustacea</b> .....             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Miscellaneous</b> .....         | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | *   | ... |

\* Indicates presence.



Summary of Stomach Contents of Rainbow Trout (*Salmo irideus*  
Gibbons)—continued.

| Stomach No. ....                   | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Coleoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Scarabæidæ .....                   | 1   | ... | ... | ... | ... | ... | ... | ... | ... | 78  | ... | 5   | 5   | ... |
| Elateridæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Chrysomelidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Curculionidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Dryopidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... |
| Carabidæ .....                     | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cleridæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lampyridæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tenebrionidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Dytiscidæ .....                    | 1   | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Gyrinidæ .....                     | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cerambycidæ .....                  | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Coccinellidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Hydrophilidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... |
| Lagridæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Hemiptera—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Pentatomidæ .....                  | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Jassidæ, etc. ....                 | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Naucoridæ .....                    | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Corixidæ .....                     | ... | ... | ... | ... | 6   | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Reduviidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cicadidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Belostomidæ .....                  | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Hymenoptera—</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Formicidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Apidæ .....                        | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| Ichneumonidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tenthredinidæ .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Braconidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Thynnidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Vespidæ, etc. ....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Orthoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Acrididæ .....                     | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Blattidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Trichoptera</b> .....           | 83  | 19  | 92  | 12  | 25  | 2   | 57  | 143 | 23  | 1   | 16  | 6   | ... | 334 |
| <b>Lepidoptera</b> .....           | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Odonata—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Anisoptera .....                   | ... | ... | ... | ... | 2   | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Zygoptera .....                    | ... | ... | ... | ... | 2   | ... | ... | ... | ... | ... | ... | 1   | ... | ... |
| <b>Ephemeroptera</b> .....         | 1   | ... | ... | 1   | 1   | ... | ... | 1   | ... | ... | ... | 9   | ... | 1   |
| <b>Diptera—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Syrphidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tipulidæ .....                     | ... | ... | ... | ... | ... | ... | 3   | ... | ... | ... | ... | ... | ... | ... |
| Mycetophyllidæ .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Stratiomyidæ .....                 | ... | ... | ... | ... | ... | ... | 2   | ... | ... | ... | ... | ... | ... | ... |
| Asilidæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Leptidæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Bibionidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tabanidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Unidentifiable .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Thysanoptera</b> .....          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Perilaria</b> .....             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Isoptera</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Miscellaneous Insects</b> ..... | ... | ... | ... | ... | ... | ... | ... | *   | ... | ... | ... | ... | ... | ... |
| <b>Arachnida—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Araneidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Pseudoscorpionidæ .....            | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Vermes</b> .....                | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Mollusca</b> .....              | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Amphibia</b> .....              | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Reptilia</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Mammalia</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Crustacea</b> .....             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Miscellaneous</b> .....         | ... | ... | *   | ... | ... | ... | ... | ... | ... | ... | *   | *   | ... | ... |

\*Indicates presence.

Summary of Stomach Contents of Rainbow Trout (*Salmo irideus* Gibbons)—continued.

| Stomach No. ....                   | 29 | 30  | 31 | 32 | 33  | 34 | 35  | 36  | 37  | 38  | 39 | 40  | 41  | 42 |
|------------------------------------|----|-----|----|----|-----|----|-----|-----|-----|-----|----|-----|-----|----|
| <b>Coleoptera—</b>                 |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Scarabaeidae .....                 |    |     | 1  |    | 3   |    | 2   |     |     | 5   |    |     |     |    |
| Elateridae .....                   |    |     | 1  |    | 1   |    |     |     |     |     |    |     |     |    |
| Chrysomelidae .....                |    |     | 6  |    | 1   |    |     |     |     | 1   |    |     |     |    |
| Curculionidae .....                |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Dryopidae .....                    |    |     |    |    |     |    |     |     |     |     |    | 2   |     |    |
| Carabidae .....                    |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Cleridae .....                     |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Lampyridae .....                   |    |     | 6  |    |     |    |     |     | 2   |     |    | 2   |     |    |
| Tenebrionidae .....                |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Dytiscidae .....                   |    |     | 1  | 1  |     |    |     |     |     |     |    |     |     |    |
| Gyrinidae .....                    |    |     |    |    |     |    |     |     |     | 1   |    |     |     |    |
| Cerambycidae .....                 |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Coccinellidae .....                |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Hydrophilidae .....                |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Lagriidae .....                    |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Hemiptera—</b>                  |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Pentatomidae .....                 |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Jassida, etc. ....                 |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Nancoridae .....                   |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Corixidae .....                    |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Reduviidae .....                   |    |     |    |    |     |    |     |     | 1   |     |    | 1   | 1   |    |
| Cicadidae .....                    |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Belostomidae .....                 |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Hymenoptera—</b>                |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Formicidae .....                   |    |     | 1  |    |     | 5  |     |     | 3   |     |    |     |     |    |
| Apidae .....                       |    |     |    |    |     |    |     |     | 1   |     |    |     |     |    |
| Ichneumonidae .....                |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Tenthredinidae .....               |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Braconidae .....                   |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Thynnidae .....                    |    |     |    |    | 3   |    |     |     |     |     |    |     |     |    |
| Vespidæ, etc. ....                 |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Orthoptera—</b>                 |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Acrididae .....                    |    |     | 1  |    | 2   |    |     |     |     |     |    |     |     |    |
| Blattidae .....                    |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Trichoptera .....</b>           | 73 | 212 |    | 57 | 122 | 8  | 723 | 181 | 773 | 730 | 10 | 117 | 129 | 22 |
| <b>Lepidoptera .....</b>           |    |     | 2  |    |     |    |     |     |     |     |    |     |     |    |
| <b>Odonata—</b>                    |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Anisoptera .....                   |    |     | 1  | 1  |     |    |     |     | *   |     | 2  |     |     | 1  |
| Zygoptera .....                    | *  |     |    |    |     | *  |     |     |     |     |    |     |     |    |
| <b>Ephemeroptera .....</b>         | 1  | 1   |    |    | 2   | 8  | 1   |     | 4   |     |    | 1   |     | 17 |
| <b>Diptera—</b>                    |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Syrphidae .....                    |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Tipulidae .....                    |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Mycetophyllidae .....              |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Stratiomyidae .....                |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Asilidae .....                     |    |     |    |    |     |    |     |     | 1   |     |    |     |     |    |
| Lepidae .....                      |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Bibionidae .....                   |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Tabanidae .....                    |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Unidentifiable .....               |    |     |    |    | 3   |    |     |     |     |     |    |     |     |    |
| <b>Thysanoptera .....</b>          |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Perlaria .....</b>              |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Isoptera .....</b>              |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Miscellaneous Insects .....</b> |    |     | *  |    | *   |    | *   |     |     |     |    |     |     |    |
| <b>Arachnida—</b>                  |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| Araneidae .....                    |    |     |    |    |     | 1  |     |     | 1   |     |    |     | 1   |    |
| Pseudoscorpionidae .....           |    |     |    |    |     |    |     |     |     |     | 4  |     |     |    |
| <b>Vermes .....</b>                |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Mollusca .....</b>              |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Amphibia .....</b>              |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Reptilia .....</b>              |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Mammalia .....</b>              |    |     |    |    |     |    |     |     |     |     |    |     |     |    |
| <b>Crustacea .....</b>             |    |     |    | 10 | *   | *  |     | 67  |     | *   |    |     | *   | *  |
| <b>Miscellaneous .....</b>         |    |     |    |    |     |    |     |     |     |     |    |     |     |    |

\* Indicates presence.

**Summary of Stomach Contents of Rainbow Trout (*Salmo irideus*  
Gibbons)—continued.**

| Stomach No. ....                   | 43  | 44  | 45  | 46  | 47  | 48  | 49  | 50  | 51  | 52  | 53  | 54  | 55  | 56  |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Coleoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Scarabaeidae .....                 | ... | ... | ... | ... | ... | ... | 3   | 1   | ... | 1   | 12  | 49  | 1   | 45  |
| Elateridae .....                   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | 3   | ... | 10  |
| Chrysomelidae .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | 28  | ... | 11  |
| Curculionidae .....                | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| Dryopidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Carabidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cleridae .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lampyridae .....                   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tenebrionidae .....                | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | 1   | ... | ... |
| Dytiscidae .....                   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Gyrinidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cerambycidae .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... |
| Coccinellidae .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   |
| Hydrophilidae .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lagriidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Hemiptera—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Pentatomidae .....                 | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2   | ... | ... |
| Jassida, etc. ....                 | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | 2   | ... | ... |
| Naucoridae .....                   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| Corixidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Reduviidae .....                   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cicadidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Belostomidae .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Hymenoptera—</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Formicidae .....                   | ... | 1   | ... | ... | ... | ... | ... | ... | ... | 4   | ... | ... | ... | ... |
| Apidae .....                       | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2   | ... | 13  | ... | 8   |
| Ichneumonidae .....                | ... | ... | ... | ... | ... | ... | 2   | ... | ... | ... | ... | 2   | ... | ... |
| Tenthredinidae .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Braconidae .....                   | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | 1   | ... | ... |
| Thynnidae .....                    | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Vespiidae, etc. ....               | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... |
| <b>Orthoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Acrididae .....                    | ... | ... | 1   | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| Blattidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Trichoptera</b> .....           | 430 | 85  | 160 | 55  | ... | 32  | 129 | 24  | 40  | 6   | 15  | 1   | 566 | 4   |
| <b>Lepidoptera</b> .....           | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Odonata—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Anisoptera .....                   | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Zygoptera .....                    | ... | ... | ... | ... | ... | ... | *   | ... | 4   | ... | 1   | 1   | ... | 1   |
| <b>Ephemeroptera</b> .....         | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9   | 2   | *   | 2   | ... |
| <b>Diptera—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Syrphidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tipulidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Mycetophyllidae .....              | ... | 4   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Stratiomyidae .....                | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | 1   |
| Asilidae .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Leptidae .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Bibionidae .....                   | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... |
| Tabanidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Unidentifiable .....               | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Thysanoptera</b> .....          | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Perlaria</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... |
| <b>Isoptera</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | *   |
| <b>Miscellaneous Insects</b> ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | *   | *   | ... | *   |
| <b>Arachnida—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Araneidae .....                    | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | 1   | 1   | ... |
| Pseudoscorpionidae .....           | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Vermes</b> .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... |
| <b>Mollusca</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Amphibia</b> .....              | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Reptilia</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Mammalia</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Crustacea</b> .....             | ... | ... | 134 | 157 | ... | 112 | ... | ... | 1   | ... | ... | ... | ... | ... |
| <b>Miscellaneous</b> .....         | ... | ... | ... | ... | ... | *   | ... | ... | ... | ... | ... | ... | ... | ... |

\* Indicates presence.

Summary of Stomach Contents of Rainbow Trout (*Salmo irideus* Gibbons)—continued.

| Stomach No. ....             | 57  | 58  | 59  | 60  | 61  | 62  | 63  | 64  | 65  | 66  | 67  | 68  | 69  | 70  |
|------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Coleoptera—</b>           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Scarabæidae .....            | 12  | 1   | 21  | 4   | 4   | 6   | ... | ... | ... | ... | ... | ... | 1   | 55  |
| Elateridae .....             | 1   | ... | ... | 2   | ... | 1   | ... | ... | ... | ... | ... | ... | ... | 7   |
| Chrysomelidae .....          | 5   | ... | ... | 3   | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... |
| Curculionidae .....          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... |
| Dryopidae .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   |
| Carabidae .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cleridae .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lampyridæ .....              | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tenebrionidae .....          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Dytiscidae .....             | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Gyrinidae .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... |
| Cerambycidae .....           | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Coccinellidae .....          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Hydrophilidae .....          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lagriidae .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Hemiptera—</b>            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Pentatomidæ .....            | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2   | ... | 2   |
| Jassidae, etc. ....          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Naucoridae .....             | ... | ... | ... | 2   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Corixidae .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Reduviidae .....             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cicadidae .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Belostomidae .....           | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Hymenoptera—</b>          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Formicidae .....             | ... | 1   | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   |
| Apidae .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ichneumonidae .....          | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tenthredinidæ .....          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Braconidae .....             | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| Thynnidae .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Vespidæ, etc. ....           | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Orthoptera—</b>           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Acrididæ .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Blattidæ .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Trichoptera</b>           | ... | 5   | 2   | 9   | 32  | 11  | ... | 9   | 4   | ... | 11  | 7   | 1   | 1   |
| <b>Lepidoptera</b>           | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Odonata—</b>              |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Anisoptera .....             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2   | ... | ... |
| Zygoptera .....              | ... | ... | ... | ... | ... | 16  | ... | ... | ... | ... | ... | 1   | ... | 3   |
| <b>Ephemeroptera</b>         | ... | ... | ... | 1   | ... | ... | ... | 1   | 1   | ... | ... | ... | ... | ... |
| <b>Diptera—</b>              |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Syrphidæ .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tipulidæ .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Mycetophyllidæ .....         | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Stratiomyidæ .....           | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| Asilidæ .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   |
| Leptidæ .....                | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| Bibionidæ .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tabanidæ .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Unidentifiable .....         | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | *   |
| <b>Thysanoptera</b>          | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Perilaria</b>             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Isoptera</b>              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Miscellaneous Insects</b> | *   | ... | ... | *   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Arachnida—</b>            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Araneidæ .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... |
| Pseudoscorpionidæ .....      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Vermes</b>                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Mollusca</b>              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Amphibia</b>              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   |
| <b>Reptilia</b>              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Mammalia</b>              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Crustacea</b>             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Miscellaneous</b>         | ... | *   | ... | ... | ... | ... | ... | *   | *   | ... | *   | *   | *   | ... |

\* Indicates presence.

Summary of Stomach Contents of Rainbow Trout (*Salmo irideus* Gibbons)—continued.

| Stomach No. ....             | 71  | 72  | 73  | 74  | 75  | 76  | 77    | 78    | 79  | 80  | 81  | 82  | 83  | Total. |
|------------------------------|-----|-----|-----|-----|-----|-----|-------|-------|-----|-----|-----|-----|-----|--------|
| <b>Coleoptera—</b>           |     |     |     |     |     |     |       |       |     |     |     |     |     |        |
| Scarabæidæ                   | 8   | ... | 7   | 3   | 5   | 2   | 28    | 29    | 2   | ... | ... | ... | ... | 404    |
| Elateridæ                    | ... | ... | ... | ... | ... | ... | 1     | ...   | ... | ... | ... | ... | ... | 22     |
| Chrysomelidæ                 | ... | ... | ... | 6   | ... | ... | ...   | 9     | 3   | ... | ... | ... | ... | 91     |
| Curculionidæ                 | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 5      |
| Dryopidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 6      |
| Carabidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 2      |
| Cleridæ                      | ... | ... | ... | 1   | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| Lampyridæ                    | ... | ... | ... | ... | ... | ... | 1     | ...   | ... | ... | ... | ... | ... | 15     |
| Tenebrionidæ                 | ... | ... | ... | ... | ... | ... | ...   | 1     | ... | ... | ... | ... | ... | 6      |
| Dytiscidæ                    | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 15     |
| Gyrinidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| Cerambycidæ                  | ... | ... | ... | 1   | ... | 2   | ...   | ...   | ... | ... | ... | ... | ... | 9      |
| Coccinellidæ                 | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 2      |
| Hydrophilidæ                 | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 2      |
| Lagriidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 3      |
| <b>Hemiptera—</b>            |     |     |     |     |     |     |       |       |     |     |     |     |     |        |
| Pentatomidæ                  | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 5      |
| Jassidæ, etc.                | 1   | ... | ... | 3   | ... | 4   | ...   | ...   | ... | ... | ... | ... | ... | 17     |
| Naucoridæ                    | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| Corixidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 16     |
| Reduviidæ                    | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 3      |
| Cicadidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 2      |
| Belostomidæ                  | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| <b>Hymenoptera—</b>          |     |     |     |     |     |     |       |       |     |     |     |     |     |        |
| Formicidæ                    | ... | ... | 8   | 44  | 53  | 5   | 2,000 | 1,297 | 76  | ... | ... | ... | ... | 3,491  |
| Apidæ                        | ... | ... | 1   | ... | ... | ... | ...   | 1     | 1   | ... | ... | ... | ... | 41     |
| Ichneumonidæ                 | ... | ... | ... | ... | ... | ... | ...   | ...   | 1   | ... | ... | ... | ... | 4      |
| Tenthredinidæ                | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 4      |
| Braconidæ                    | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| Thynnidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 8      |
| Vespidæ, etc.                | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 2      |
| <b>Orthoptera—</b>           |     |     |     |     |     |     |       |       |     |     |     |     |     |        |
| Acrididæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | 100 | 394 | 500    |
| Blattidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| <b>Trichoptera</b>           | ... | 9   | ... | 5   | 8   | 2   | 4     | 25    | 38  | ... | 1   | ... | ... | 7,270  |
| <b>Lepidoptera</b>           | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | 1   | ... | ... | 9      |
| <b>Odonata—</b>              |     |     |     |     |     |     |       |       |     |     |     |     |     |        |
| Anisoptera                   | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 19     |
| Zygoptera                    | 1   | ... | ... | 2   | ... | ... | ...   | ...   | 8   | ... | 1   | ... | ... | 44     |
| <b>Ephemeroptera</b>         | ... | ... | ... | ... | ... | ... | 1     | ...   | ... | ... | ... | ... | ... | 116    |
| <b>Diptera—</b>              |     |     |     |     |     |     |       |       |     |     |     |     |     |        |
| Syrphidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| Tipulidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 3      |
| Mycetophyllidæ               | ... | ... | ... | ... | ... | 8   | ...   | 15    | ... | ... | ... | ... | ... | 27     |
| Stratiomyidæ                 | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 9      |
| Asilidæ                      | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 3      |
| Leptidæ                      | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| Bibionidæ                    | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 6      |
| Tabanidæ                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| Unidentifiable               | *   | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 4      |
| <b>Thysanoptera</b>          | ... | ... | ... | ... | ... | ... | ...   | ...   | 1   | ... | ... | ... | ... | 2      |
| Perlaria                     | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | *      |
| <b>Isoptera</b>              | ... | 7   | ... | 55  | ... | ... | 47    | 27    | ... | ... | ... | ... | ... | 137    |
| <b>Miscellaneous insects</b> | *   | ... | ... | ... | *   | ... | ...   | *     | ... | ... | ... | ... | ... | *      |
| <b>Arachnida—</b>            |     |     |     |     |     |     |       |       |     |     |     |     |     |        |
| Araneidæ                     | ... | ... | ... | ... | ... | 1   | ...   | ...   | ... | ... | 1   | ... | ... | 11     |
| Pseudoscorpionidæ            | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| <b>Vermes</b>                | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 6      |
| <b>Mollusca</b>              | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| <b>Amphibia</b>              | ... | 5   | ... | 2   | ... | 1   | ...   | 1     | ... | ... | ... | ... | ... | 12     |
| <b>Reptilia</b>              | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | 1   | ... | 1      |
| <b>Mammalia</b>              | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 1      |
| <b>Crustacea</b>             | ... | ... | ... | ... | ... | ... | ...   | ...   | ... | ... | ... | ... | ... | 481    |
| <b>Miscellaneous</b>         | ... | ... | ... | ... | ... | ... | ...   | ...   | *   | *   | *   | ... | ... | *      |

\* Indicates presence.

**Stomach Contents of Brown Trout.***(Salmo fario* Linnæus.)**Duckmaloi River.**

- No. 1.—♀, 1lb.; 26 January, 1935. Collected by Mr. A. E. Church.—Coleoptera : 1 *Paropsis* larva, 1 Click beetle (? gen. et sp.). Hemiptera : 2 immature Pentatomid bugs. Odonata : 1 Anisopterid nymph. Ephemeroptera : 3 mayfly nymphs together with a quantity of mayfly wings and fragmentary remains. Diptera : 1 Mycetophyllid midge. Araneidæ : 1 small spider (*Araneus* sp.).
- No. 2.—♂, 1 lb. 3 oz.; 26 January, 1935. Collected by Mr. A. E. Church.—Trichoptera : 6 caddis-cases (sand). Odonata : 2 Agrionid nymphs.
- No. 3.—♀,  $\frac{3}{4}$  lb.; 26 January, 1935.—Collected by Mr. A. E. Church. NOTE : Very thin fish in poor condition.—Coleoptera : 1 *Paropsis* larva.
- No. 4.—♀, 1 lb.; 26 January, 1935. Collected by Mr. A. E. Church.—Coleoptera : 22 *Paropsis* larvæ, 5 *Heteronyx* sp. Hymenoptera : 3 ants (*Iridomyrmex* sp.), 1 ant (*Camponotus* sp.), 1 Bulldog ant (*Myrmecia gulosa*). Orthoptera : 1 grasshopper (immature). Odonata : 2 large anisopterid nymphs. Ephemeroptera : 5 mayflies. Miscellaneous insects : small quantity of broken insect remains. Vermes : 1 Gordian worm.
- No. 5.—♀, 1 lb.; 27 January, 1935. Collected by Mr. A. E. Church.—Coleoptera : 2 *Paropsis* larvæ, 1 *Paropsis* (? gen. et sp.), 1 beetle (*Heteronychus* sp.). Hymenoptera : 1 ant (*Iridomyrmex* sp.), 1 small wasp (? gen. et sp.). Odonata : 1 large Zygopterid nymph. Ephemeroptera : 3 mayflies and a quantity of wings. Araneidæ : 1 spider (*Tetragnatha* sp.).
- No. 6.—♀, 1½ lb.; 27 January, 1935. Collected by Mr. A. E. Church.—Coleoptera : 10 *Paropsis* larvæ, and a quantity of unidentifiable coleopterous remains, 1 Hydrophyllid larva. Trichoptera : 8 caddis-cases (sand). Odonata : 5 large Anisopterid nymphs. Ephemeroptera : 2 mayfly nymphs.
- No. 7.—♂, 1½ lb.; 27 January, 1935. Collected by Mr. A. E. Church.—Coleoptera : 1 small Hydrophyllid beetle (? gen. et sp.). Trichoptera : 1 caddis-case (sand).
- No. 8.—♂, 1 lb.; 27 January, 1935. Collected by Mr. A. E. Church.—Coleoptera : 1 Dryopid beetle (? sp. nov.). Hymenoptera : 4 ants (various spp.). Trichoptera : 1 caddis-case (sand). Ephemeroptera : 1 mayfly. Miscellaneous insects : very small quantity of unidentifiable insect fragments. Arachnida : 1 *Trombidium* mite.
- No. 9.—♂, 2 lb.; 27 January, 1935. Collected by Mr. A. E. Church.—Coleoptera : 1 Gyrinid beetle (? gen. et sp.), 1 large Hydrophyllid larva. Hymenoptera : head of Bulldog ant (*Myrmecia* sp.). Trichoptera : 2 caddis-cases (sand). Odonata : wings of Zygopterid dragonflies. Reptilia : 1 lizard (*Lygosoma* sp.) 3 inches long.
- No. 10.—? sex, 1 lb.; 28 January, 1935. Collected by Mr. A. E. Church.—Hymenoptera : 1 Bulldog ant (*Myrmecia gulosa*). Odonata : 2 Zygopterid dragonflies (imagines).

- No. 11.—♂, 1 lb. 10 oz.; 28 January, 1935. Collected by Mr. A. E. Church.—Coleoptera: 1 Gyrinid beetle (? gen. et sp.). 1 *Paropsis* sp., 3 *Heteronyx* sp. Hymenoptera: 3 ants (various spp.). Orthoptera: 1 Cockroach (*Panesthia* sp.). Lepidoptera: 1 lepidopterous larva. Odonata: 1 large Anisopterid dragonfly (imago) (? gen. et sp.). Ephemeroptera: 2 mayflies. Miscellaneous insects: quantity of finely divided and unidentifiable insect fragments.
- No. 12.—♀,  $\frac{3}{4}$  lb.; 28 January, 1935. Collected by Mr. A. E. Church.—Coleoptera: 1 coleopterous larva. Orthoptera: 1 immature locust (Acridiidae). Trichoptera: 1 caddis-case (sand). Odonata: wings of Zygopterid dragonfly (imago).
- No. 13.—♂, 1 lb. 14 oz.; 28 January, 1935. Collected by Mr. A. E. Church.—Coleoptera: 5 *Paropsis* larvæ, and quantity of unidentifiable coleopterous remains. Hemiptera: 1 Reduviid bug (? gen. et sp.). Hymenoptera: 1 bee (*Apis mellifica*), 1 Bulldog ant (*Myrmecia gulosa*), 1 Ichneumon wasp (? gen. et sp.). Orthoptera: 2 Crickets ♂ and ♀ (*Gryllus servillei*). Trichoptera: 1 caddis-fly. Odonata: 1 large Anisopterid nymph. Ephemeroptera: 1 mayfly. Diptera: quantity of unidentifiable remains.
- No. 14.—♀, 1 lb. 2 oz.; 28 January, 1935. Collected by Mr. A. E. Church.—Coleoptera: small quantity of unidentifiable remains. Hemiptera: 1 Pentatomid bug (*Diemenia* sp.), 1 Capsid bug (? gen. et sp.). Hymenoptera: 1 wasp (*Psammocharidæ*), 2 Bulldog ants (*Myrmecia gulosa*). Odonata: 2 large Anisopterid nymphs.
- No. 15.—♀,  $1\frac{1}{2}$  lb.; 28 January, 1935. Collected by Mr. A. E. Church.—Coleoptera: 1 Histerid beetle (? gen. et sp.), 1 Rhipidocerid beetle. Hymenoptera: 3 Bulldog ants (*Myrmecia* ? *nigra*). Orthoptera: 1 Cricket (*Gryllus* sp.). Trichoptera: 4 caddis-cases (sand). Lepidoptera: 2 Lepidopterous larvæ. Odonata: 3 small Anisopterid nymphs. Miscellaneous insects: small quantity of unidentifiable remains. Araneida: 1 Huntsman Spider (*Isopeda* sp.).

#### Tuross River.

- No. 16.—♀,  $1\frac{1}{2}$  lb.; 22 December, 1934, 12:30 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 11 *Phyllotocus navicularis*, 6 *Liparetrus* sp., 1 *Heteronyx* sp., 1 Click beetle (*Crepidomenus* sp.), 1 *Cryptocephalus* sp. Hymenoptera: 1 Sawfly (*Perga dorsalis*) (imago). Trichoptera: 14 caddis-cases (sand). Odonata: 1 Anisopterid nymph, 3 Zygopterid dragonflies (imagines). Ephemeroptera: 3 mayflies. Miscellaneous insects: small quantity of triturated insect remains.
- No. 17.—♂, 2 lb.; 23 December, 1934, 1 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 1 Tenebrionid beetle (? gen. et sp.). Hemiptera: 1 cicada (*Melampsalta encausta*). Trichoptera: 22 caddis-cases (sand), 5 caddis-cases (stick). Odonata: 14 Zygopterid dragonflies (imagines). Miscellaneous insects: small quantity of unidentifiable insect remains. Vermes: 2 Gordian worms.
- No. 18.—♂,  $1\frac{1}{2}$  lb.; 24 December, 1934, 12:30 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 3 Christmas beetles (*Anoplognathus pectoralis*), 1 *Phyllotocus navicularis*. Trichoptera: 17 caddis-cases (sand).

- No. 19.—♂, 1½ lb.; 24 December, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Red Cocky. Coleoptera: 1 *Anoplognathus pectoralis*, 1 *Phyllotocus navicularis*, 1 Lampyrid (? gen. et sp.), 2 Click beetles (Elateridæ; ? gen. et sp.), 1 Chrysomelid beetle (? gen. et sp.). Hymenoptera: 1 bee (? *Halictus* sp.). Trichoptera: 6 caddis-cases (sand), 1 caddis-case (stick). Miscellaneous insects: small quantity of unidentifiable insect fragments.
- No. 20.—♀, 1 lb.; 24 December, 1935, 12.45 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 1 Tenebrionid beetle (? gen. et sp.), 2 *Phyllotocus navicularis*, 1 Click beetle (Elateridæ; ? gen. et sp.). Trichoptera: 123 caddis-cases (sand), 1 caddis-case (stick).
- No. 21.—♂, 1¾ lb.; 24 December, 1935, 1 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Hemiptera: 1 *Corixa* sp. Trichoptera: 6 caddis-cases (sand). Odonata: wings of Zygopterid dragonflies.
- No. 22.—♀, 1 lb.; 26 December, 1935, 12.30 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 1 *Anoplognathus pectoralis*. Hemiptera: 2 *Corixa* sp. Trichoptera: 27 caddis-cases (sand).
- No. 23.—♀, 1½ lb.; 26 December, 1935, 2 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Red Cocky. Hemiptera: 9 *Corixa* sp., 1 *Gerris* sp. Trichoptera: 2 caddis-cases (sand), 2 caddis-cases (stick). Odonata: 1 Anisopterid nymph, 1 Zygopterid nymph.
- No. 24.—♀, 1 lb.; 26 December, 1935, 5 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Red Palmer. Trichoptera: 49 caddis-cases (sand).
- No. 25.—♀, 1¼ lb.; 27 December, 1935, 12.30 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Red Cocky. Coleoptera: 1 *Anoplognathus pectoralis*, 3 Click beetles (Elateridæ; ? gen. et sp.), 2 Chrysomelid beetles (? gen. et sp.). Hemiptera: 1 Jassid (? gen. et sp.). Hymenoptera: 1 Saw-fly (*Perga ferruginea*). Trichoptera: 217 caddis-cases (sand).
- No. 26.—♀, 1 lb.; 27 December, 1935, 11.15 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Red Cocky. Coleoptera: 12 *Phyllotocus navicularis*, 1 *Anoplognathus pectoralis*, 1 Dung beetle (*Onthophagus granulatus*), 1 *Aphodius* sp., 1 *Cadmus* sp. Hemiptera: 1 cicada (*Melampsalta encausta*). Trichoptera: 63 caddis-cases (sand), 2 caddis-cases (stick). Lepidoptera: 1 moth (? gen. et sp.). Diptera: Head of fly. Miscellaneous insects: quantity of broken and unidentifiable insects remains.
- No. 27.—♀, 1¼ lb.; 28 December, 1935, 7 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 5 *Phyllotocus navicularis*, 1 *Anoplognathus pectoralis*, 1 *Liparetrus* sp. 1 small Dytiscid beetle (? gen. et sp.). Hemiptera: 1 Jassid (? gen. et sp.). Hymenoptera: 1 bee (? *Halictus* sp.). Trichoptera: 4 caddis-cases (sand). Ephemeroptera: 1 mayfly nymph. Diptera: 1 Bombyliid fly (? gen. et sp.), 1 Stratiomyid fly (*Odontomyia* sp.), 1 Mycetophyllid midge (? gen. et sp.). Amphibia: bones of small frog. Crustacea: 1 shrimp (*Paratya australiensis*).
- No. 28.—♂, 2½ lb.; 28 December, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Odonata: wings of Zygopterid dragonflies. Crustacea: 1 shrimp (*Paratya australiensis*).



- No. 29.—♀, 1½ lb.; 30 December, 1935, 5 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 2 *Liparetrus* sp. Lepidoptera: 1 moth (? gen. et sp.). Diptera: 1 Mycetophyllid midge (? gen. et sp.). Miscellaneous: quantity of mud.
- No. 30.—♀, 2 lb.; 31 December, 1935, 1 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 1 *Anoplognathus pectoralis*, 4 *Cryptocephalus* sp., 1 *Liparetrus* sp., 1 *Phyllotocus navicularis*, 1 Carab beetle (*Clivina* sp.), 1 Clerid beetle (? gen. et sp.). Hemiptera: 6 cicadas (*Melampsalta* sp.), and large quantity of remains, 1 Jassid (? gen. et sp.). Hymenoptera: 1 Ichneumon wasp (? gen. et sp.), 1 wasp (*Pison* sp.). Trichoptera: 1 caddis-case (stick). Odonata: 1 Anisopterid nymph, wings of Zygopterid dragonflies. Perlaria: 1 Stone-fly (? gen. et sp.).
- No. 31.—♂, 2½ lb.; 31 December, 1935, 6:30 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Red Cocky. Coleoptera: 137 *Phyllotocus navicularis*, 1 *Heteronyx* sp., 2 Christmas beetles (*Anoplognathus pectoralis*), 1 Cistelid beetle (? gen. et sp.), 5 Click beetles (Elateridæ; ? gen. et sp.), and a large quantity of coleopterous remains, mainly *Phyllotocus*. Hymenoptera: 1 Thynnid wasp ♀ (? gen. et sp.).
- No. 32.—♀, 1½ lb.; 31 December, 1935, 2:30 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Red Cocky. Coleoptera: 1 Lampyrid beetle (? gen. et sp.), 1 beetle without elytra. Hemiptera: 5 cicadas (*Melampsalta* sp.), 2 *Corixa* sp. Hymenoptera: 1 Thynnid wasp (? gen. et sp.). Neuroptera: 1 *Chrysopa ramburi*. Trichoptera: 8 caddis-flies and a large quantity of wings, etc., 6 caddis-cases (sand). Odonata: 1 Anisopterid nymph. Diptera: 1 crane-fly (*Gynoplistia* sp.). Miscellaneous insects: very large quantity of unidentifiable insect remains. Vermes: 1 Gordian worm.
- No. 33.—♀, 2 lb.; 1 January, 1935, 12 (noon). Collected by Dr. A. J. Spiller Brandon. Fly: Small Brown Palmer. Coleoptera: 1 *Anoplognathus viridæneus*, 1 *Heteronyx* sp., 1 large Click beetle (? gen. et sp.), 3 small Click beetles (Elateridæ; ? gen. et sp.), 1 *Paropsis* sp., 1 *Liparetrus* sp., 1 *Phyllotocus* sp., 1 *Cryptocephalus* sp., 1 *Anoplognathus pectoralis*, 1 Chrysomelid beetle (? gen. et sp.). Hemiptera: 1 Tree-hopper (Cercopidæ; ? gen. et sp.), Head of cicada (*Melampsalta* sp.). Hymenoptera: 1 ant (Dorylinæ). Odonata: wings of Zygopterid dragonflies. Miscellaneous insects. Quantity of finely broken and unidentifiable insect remains. Araneidæ: 1 spider (*Epeira* sp.). Vermes: 1 Gordian worm.
- No. 34.—♂, 3½ lb.; 2 January, 1935, 4:30 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 7 *Anoplognathus pectoralis*, 6 *Phyllotocus navicularis*, 1 *Heteronyx* sp., 1 Click beetle (? gen. et sp.). Hymenoptera: 1 Thynnid wasp ♂ (? gen. et sp.). Trichoptera: 16 caddis-cases (sand), 1 caddis-case (stick). Diptera: 1 large Asilid fly (*Neoaratus* sp.).
- No. 35.—♀, 2 lb.; 2 January, 1935, 12:30 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Pennell Hackle. Coleoptera: 1 Christmas beetle (*Anoplognathus pectoralis*), 9 *Phyllotocus navicularis*, 1 Chrysomelid beetle (? gen. et sp.). Hymenoptera: 1 winged ant (? *Iridomyrmex* sp.). Odonata: 2 Anisopterid dragonflies ♂ and ♀, 5 Zygopterid dragonflies (imagines). Ephemeroptera: 4 mayflies. Isoptera: 1 winged termite (*Coptotermes* sp.). Amphibia: bones of a frog.

- No. 36.—♂, 3 lb.; 2 January, 1935, 4.30 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 3 *Anoplognathus pectoralis*, 1 *Heteronyx* sp., and a small quantity of coleopterous remains. Hymenoptera: 1 winged ant (? gen. et sp.). Diptera: 1 Bombyliid fly (? gen. et sp.). Perlaria: 2 Stone-flies (? gen. et sp.).
- No. 37.—♂, 3 lb.; 2 January, 1935, 5 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Red Cocky. Coleoptera: 8 Christmas beetles (*Anoplognathus pectoralis*), 9 *Heteronyx* sp., 2 *Phyllotocus navicularis*, 2 Tenebrionid beetles (*Adelium* sp.), 1 Cistelid beetle (? gen. et sp.), and small quantity of coleopterous remains. Hymenoptera: 1 Thynnid wasp ♂ (? gen. et sp.). Orthoptera: 1 grasshopper (Acridiidae; *Gastrimargus musicus*). Lepidoptera: 1 moth (? gen. et sp.). Trichoptera: 3 caddis-cases (sand). Vermes: 1 Gordian worm.
- No. 38.—♂, 3¼ lb.; 3 January, 1935, 11 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 30 Christmas beetles (*Anoplognathus pectoralis*), and stomach crammed with broken remains, 1 *Heteronychus ? prunosus*.
- No. 39.—♂, 2¼ lb.; 4 January, 1935, 11 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. NOTE.—“Murphys.” Coleoptera: 7 *Phyllotocus navicularis*, 1 *Aulococyclus* sp. Odonata: 20 Zygopterid dragonflies (imagines), 4 Zygopterid nymphs.
- No. 40.—♀, 2¾ lb.; 7 January, 1935, 10.30 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 1 Christmas beetle (*Anoplognathus pectoralis*), 1 *Diphucephala* sp. Diptera: 1 fly (? gen. et sp.).
- No. 41.—♀, 3 lb.; 12 January, 1935, 11 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 11 Christmas beetles (*Anoplognathus pectoralis*), 15 *Phyllotocus navicularis*, 1 Tenebrionid beetle (*Adelium* sp.), 1 *Heteronyx* sp.
- No. 42.—♂, 1½ lb.; 13 January, 1935, 1 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. NOTE.—River rose 1 ft. during the night (raining). Coleoptera: 2 Christmas beetles (*Anoplognathus pectoralis*), 1 weevil (*Belus* sp.).
- No. 43.—♀, 1¼ lb.; 19 January, 1935, 11 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Pennell Hackle. Coleoptera: 22 *Phyllotocus navicularis*, 1 *Cryptocephalus* sp., 1 Jewel beetle (*Stigmodera* sp.) Trichoptera: 33 caddis-cases (sand). Perlaria: 1 Stone-fly nymph.
- No. 44.—♀, 1 lb.; 19 January, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Pennell Hackle. Coleoptera: 62 *Phyllotocus navicularis*, 1 Jewel beetle (*Stigmodera* sp.), 1 Click beetle (Elateridae; ? gen. et sp.), 1 Cistelid beetle (? gen. et sp.), 1 *Heteronyx* sp. Trichoptera: 6 caddis-cases (sand). Diptera: 1 Bombyliid fly (? gen. et sp.), 1 Stratiomyid fly (*Odontomyia* sp.). Miscellaneous insects: quantity of broken and unidentifiable insect—remains.
- No. 45.—♂, 1½ lb.; 21 January, 1935, 11 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 1 Click beetle (? gen. et sp.), 2 *Phyllotocus navicularis*. Hemiptera: 1 *Corixa* sp. Trichoptera: 53 caddis-cases (sand). Odonata: 2 Zygopterid dragonflies (imagines), 1 Zygopterid nymph. Miscellaneous insects: quantity of unidentifiable insect remains.

- No. 46.—♀, 1¼ lb.; 26 January, 1935, 1 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 12 *Phyllotocus navicularis*, 1 Click beetle (Elateridæ; ? gen. et sp.), 2 Chrysomelid beetles (? gen. et sp.). Hemiptera: 1 *Corixa* sp. Trichoptera: 1 caddis-case (sand).
- No. 47.—♀, 1¼ lb.; 2 February, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Coleoptera: 2 Christmas beetles (*Anoplognathus pectoralis*). Trichoptera: 1 caddis-case (sand). Araneidæ: 1 spider (*Araneus* sp.).
- No. 48.—♀, 1 lb.; 3 February, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Ephemeroptera: 1 mayfly nymph. Crustacea: 1 shrimp (*Paratya australiensis*).
- No. 49.—♀, 1 lb.; 3 February, 1935, 6 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Black Hackle. Hemiptera: 12 *Corixa* sp. Trichoptera: 11 caddis-cases (sand). Odonata: 2 Zygopterid nymphs.
- No. 50.—♀, 1½ lb.; 9 February, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Pennell Hackle. Coleoptera: 2 *Paropsis* larvæ, 3 Dryopid larvæ. Hemiptera: 2 Jassids (? gen. et sp.). Trichoptera: 2 caddis-cases (sand).
- No. 51.—♂, 1½ lb.; 11 February, 1935, 11 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Pennell Hackle. NOTE.—Heavy fresh in river. Coleoptera: 1 Dynastid beetle (? gen. et sp.). Trichoptera: 6 caddis-cases (stick). Vegetable matter: leaves and vegetable matter.
- No. 52.—♂, 1½ lb.; 15 February, 1935, 6 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Pennell Hackle. NOTE.—River dropping after fresh. Trichoptera: 9 caddis-cases (sand), 1 caddis-case (stick). Vegetable matter: grass-stem 8½ inches in length.
- No. 53.—♀, 1½ lb.; 16 February, 1935, 11.30 a.m. Collected by Dr. A. J. Spiller Brandon. Coleoptera: 1 Hydrophylid beetle (? gen. et sp.). Trichoptera: 5 caddis-cases (sand). Amphibia: 2 frogs (1 very large, 1 small).
- No. 54.—♂, 4 lb.; 16 February, 1935, 12.30 p.m. Collected by Dr. A. J. Spiller Brandon. Fly: Pennell Hackle. NOTE.—Fish were tailing all over the river. Coleoptera: 2 *Heteronyx* sp., 2 *Aphodius* sp. Hemiptera: 2 Tree-hoppers (*Ledromorpha* sp.). Diptera: 1 Rutiliid fly (*Rutilia* ? *splendida*), 4 Mycetophyllid midges (? gen. et sp.).
- No. 55.—♀, 2¼ lb.; 17 February, 1935, 11.45 a.m. Collected by Dr. A. J. Spiller Brandon. Coleoptera: 1 *Heteronyx* sp.
- No. 56.—♀, 1¼ lb.; 18 February, 1935, 11.35 a.m. Collected by Dr. A. J. Spiller Brandon. Coleoptera: 1 *Heteronychus* sp., remains of a large beetle (? gen. et sp.). Hemiptera: 1 Reduviid bug (? gen. et sp.). Hymenoptera: 36 winged ants ♂ and ♀ (? *Iridomyrmex* sp.), 1 bee (*Halictus* sp.). Orthoptera: 1 cricket (*Gryllus servillei*), 1 immature grasshopper (Acridiidae). Trichoptera: 13 caddis-cases (sand). Odonata: 1 Anisopterid dragonfly (imago), 8 Zygopterid dragonflies (imagines). Ephemeroptera: 2 mayflies. Isoptera: 19 winged termites (*Coptotermes* sp.) and stomach crammed with wings. Miscellaneous insects: quantity of unidentifiable insect remains. Araneidæ: 1 spider (? gen. et sp.). Vermes: 1 Gordian worm.

- No. 57.—♀, 1½ lb.; 18 February, 1935, 12 (noon). Collected by Dr. A. J. Spiller Brandon.—Coleoptera: 6 Scarabæid beetles (*Prochelyna assimilis*), 1 *Polystigma octopunctata*, 5 *Heteronychus* sp., 5 *Litochrus* sp., 1 *Paropsis* larva, 1 Soldier beetle (*Telephorus pulchellus*), 1 *Diphucephala* sp. Hymenoptera: 2 winged ants ♂ and ♀ (? gen. et sp.). Trichoptera: 5 caddis-cases (sand), 2 caddis-cases (stick). Diptera: 1 *Bibio* sp., 1 Mycetophyllid midge. Isoptera: 1 winged termite. Miscellaneous insects: large quantity of finely broken and unidentifiable insect fragments. Miscellaneous: 2 feathers.
- No. 58.—♀, 1 lb.; 18 February, 1935, 1 p.m. Collected by Dr. A. J. Spiller Brandon.—Coleoptera: 2 *Liparetrus* sp., 1 Click beetle (Elateridæ; ? gen. et sp.), 1 *Heteronychus* sp., 1 *Diphucephala* sp., 1 *Cryptocephalus* sp. Hymenoptera: 8 winged ants (? gen. et sp.). Trichoptera: 47 caddis-cases (sand), 4 caddis-cases (stick), 1 caddis-fly (imago). Lepidoptera: 1 moth (? gen. et sp.). Odonata: 1 Anisopterid dragonfly (imago), 8 Zygopterid dragonflies (imagines). Ephemeroptera: 3 mayflies. Diptera: 1 Asilid fly (? gen. et sp.). Miscellaneous insects: small quantity of remains.
- No. 59.—♂, 1 lb.; 28 February, 1935, 1-30 p.m. Collected by Dr. A. J. Spiller Brandon.—Crustacea: 1 claw of small Yabbie (*Parachærops bicarinatus*).

#### Lithgow District.

- No. 60.—? sex, ? weight; 18 March, 1935. Fish River. Collected by Lithgow Trout Fishermen's Association.—Trichoptera: 1 caddis-case (sand). Odonata: 3 small Anisopterid nymphs.
- No. 61.—♂, 1 lb.; 20 March, 1935. Fish River. Collected by Lithgow Trout Fishermen's Association.—Coleoptera: 1 small Hydrophyllid larva. Hemiptera: 1 *Corixa* sp.
- No. 62.—♂, ¾ lb.; 20 March, 1935. Fish River. Collected by Lithgow Trout Fishermen's Association. Coleoptera: 1 large Hydrophyllid larva. Trichoptera: 23 caddis-cases (sand). Odonata: 1 large Anisopterid nymph.
- No. 63.—? sex, ? weight; 20 March, 1935. Fish River. Collected by Lithgow Trout Fishermen's Association.—NOTE.—empty.
- No. 64.—♂, 1 lb.; 4 January, 1935. Tarana Quarries. Collected by Lithgow Trout Fishermen's Association.—Hemiptera: 2 *Corixa* sp. Hymenoptera: 1 winged ant (*Iridomyrmex* sp.). Trichoptera: 1 caddis-case (sand). Odonata: 2 Anisopterid dragonflies (imagines), 1 Anisopterid nymph.
- No. 65.—♀, 2¼ lb.; 27 December, 1934. Tarana Quarries. Collected by Lithgow Trout Fishermen's Association.—Coleoptera: 3 Christmas beetles (*Anoplognathus* ? *pectoralis*), 13 small *Heteronyx* sp., 1 Dung beetle (*Onthophagus granulatus*). Lepidoptera: 1 moth (? gen. et sp.).
- No. 66.—♀, 1¼ lb.; 31 December, 1934. Tarana Quarries. Collected by Lithgow Trout Fishermen's Association.—Coleoptera: 1 small *Heteronyx* sp. Hymenoptera: 1 ant (*Camponotus nigriceps*). Diptera: head of fly.
- No. 67.—♂, 2 lb.; 11 January, 1935. Tarana Quarries. Collected by Lithgow Trout Fishermen's Association.—Coleoptera: 1 Christmas beetle (*Anoplognathus porosus*). Orthoptera: 1 large grasshopper (Acridiidae; *Gastrimargus musicus*). Odonata: 1 large Anisopterid nymph.

Summary of Stomach Contents of Brown Trout (*Salmo fario* Linnæus).

| Stomach No. ....                   | 1 | 2 | 3 | 4  | 5 | 6  | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|------------------------------------|---|---|---|----|---|----|---|---|---|----|----|----|----|----|----|----|----|
| <b>Coleoptera</b> —                |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Scarabæidæ .....                   | 1 |   |   | 5  | 1 |    |   |   |   |    | 3  |    |    |    |    |    | 18 |
| Elateridæ .....                    | 1 |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    | 1  |
| Crysomelidæ .....                  | 1 |   | 1 | 22 | 3 | 10 |   |   |   |    | 1  | 1  | 5  |    |    |    | 1  |
| Curculionidæ .....                 | 1 |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Dryopidæ .....                     |   |   |   |    |   |    |   | 1 |   |    |    |    |    |    |    |    |    |
| Carabidæ .....                     |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Histeridæ .....                    |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    | 1  |    |
| Lampyridæ .....                    |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Tenebrionidæ .....                 |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    | 1  |
| Buprestidæ .....                   |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Dytiscidæ .....                    |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Gyrinidæ .....                     |   |   |   |    |   |    |   |   | 1 |    | 1  |    |    |    |    |    |    |
| Cistelidæ .....                    |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Cleridæ .....                      |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Hydrophyllidæ .....                |   |   |   |    |   | 1  | 1 |   | 1 |    |    |    |    |    |    |    |    |
| Rhipidoceridæ .....                |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    | 1  |    |
| Unidentifiable .....               |   |   |   |    |   |    |   |   |   |    |    |    |    | *  |    |    |    |
| <b>Hemiptera</b> —                 |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Pentatomidæ .....                  | 2 |   |   |    |   |    |   |   |   |    |    |    |    |    | 1  |    |    |
| Reduviidæ .....                    |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Jassidæ, etc. ....                 |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Capsidæ .....                      | 1 |   |   |    |   |    |   |   |   |    |    |    |    |    | 1  |    |    |
| Corixidæ .....                     |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Gerridæ .....                      |   |   |   |    |   |    |   |   |   |    |    |    |    | 1  |    |    |    |
| Cicadidæ .....                     |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    | 1  |
| <b>Hymenoptera</b> —               |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Formicidæ .....                    |   |   |   | 5  | 1 |    |   | 4 | 1 | 1  | 3  |    | 1  | 2  | 3  |    |    |
| Apidæ .....                        |   |   |   |    |   |    |   |   |   |    |    |    | 1  |    |    |    |    |
| Ichneumonidæ .....                 |   |   |   |    |   |    |   |   |   |    |    |    | 1  |    |    |    |    |
| Tenthredinidæ .....                |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    | 1  |
| Thynnidæ .....                     |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Vespidæ, etc. ....                 |   |   |   |    | 1 |    |   |   |   |    |    |    |    | 1  |    |    |    |
| <b>Orthoptera</b> —                |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Acrididæ .....                     |   |   |   | 1  |   |    |   |   |   |    |    | 1  |    |    |    |    |    |
| Gryllidæ .....                     |   |   |   |    |   |    |   |   |   |    |    |    | 2  |    |    | 1  |    |
| Blattidæ .....                     |   |   |   |    |   |    |   |   |   |    | 1  |    |    |    |    |    |    |
| <b>Trichoptera</b> .....           | 6 |   |   |    |   | 8  | 1 | 1 | 2 |    |    | 1  | 1  |    | 4  | 14 | 27 |
| <b>Lepidoptera</b> .....           |   |   |   |    |   |    |   |   |   |    | 1  |    |    |    | 2  |    |    |
| <b>Odonata</b> —                   |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Anisoptera .....                   | 1 | 2 |   | 2  |   | 5  |   |   |   |    | 1  |    | 1  | 2  | 3  | 1  |    |
| Zygoptera .....                    |   |   |   | 1  |   |    |   |   | 1 | 2  |    | 1  |    |    |    | 3  | 14 |
| <b>Ephemeroptera</b> .....         | 3 |   |   | 5  | 3 | 2  |   | 1 |   |    | 2  |    | 1  |    |    | 3  |    |
| <b>Neuroptera</b> .....            |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| <b>Diptera</b> —                   |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Tachinidæ .....                    |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Tipulidæ .....                     |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Mycetophyllidæ .....               | 1 |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Stratiomyidæ .....                 |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Asilidæ .....                      |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Bombylidæ .....                    |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Bibionidæ .....                    |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Unidentifiable .....               |   |   |   |    |   |    |   |   |   |    |    |    |    | *  |    |    |    |
| <b>Perlaria</b> .....              |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| <b>Isoptera</b> .....              |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| <b>Miscellaneous Insects</b> ..... |   |   |   | *  |   |    |   | * |   |    | *  |    |    |    | *  | *  | *  |
| <b>Arachnida</b> —                 |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| Araneidæ .....                     | 1 |   |   |    | 1 |    |   |   |   |    |    |    |    |    |    | 1  |    |
| Acarina .....                      |   |   |   |    |   |    |   | 1 |   |    |    |    |    |    |    |    |    |
| <b>Vermes</b> .....                |   |   |   | 1  |   |    |   |   |   |    |    |    |    |    |    |    | 2  |
| <b>Amphibia</b> .....              |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| <b>Reptilia</b> .....              |   |   |   |    |   |    |   |   | 1 |    |    |    |    |    |    |    |    |
| <b>Crustacea</b> .....             |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |
| <b>Miscellaneous</b> .....         |   |   |   |    |   |    |   |   |   |    |    |    |    |    |    |    |    |

\* Indicates presence.

Summary of Stomach Contents of Brown Trout (*Salmo fario*  
Linnæus)—continued.

| Stomach No. ....                   | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  | 32  | 33  | 34  |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Coleoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Scarabæidæ .....                   | 4   | 2   | 2   | ... | 1   | ... | ... | 1   | 15  | 7   | ... | 2   | 3   | 140 | ... | 5   | 14  |
| Elateridæ .....                    | 2   | 1   | ... | ... | ... | ... | ... | 3   | ... | ... | ... | 2   | ... | 5   | ... | 4   | 1   |
| Chrysomelidæ .....                 | 1   | ... | ... | ... | ... | ... | ... | 2   | 1   | ... | ... | ... | 4   | ... | ... | 2   | ... |
| Curculionidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Dryopidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Carabidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| Histeridæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lampyridæ .....                    | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... |
| Tenebrionidæ .....                 | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Buprestidæ .....                   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Dytiscidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Gyrinidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cistelidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... |
| Cleridæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | 1   | ... | ... | ... |
| Hydrophilidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| Rhipidoceridæ .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... |
| Unidentifiable .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Hemiptera—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Pentatomidæ .....                  | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Reduviidæ .....                    | ... | ... | ... | ... | ... | ... | ... | 1   | ... | 1   | ... | ... | 1   | ... | ... | 1   | ... |
| Jassidæ, etc. ....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Capsidæ .....                      | ... | ... | ... | 1   | 2   | 9   | ... | ... | ... | ... | ... | ... | ... | ... | 2   | ... | ... |
| Corexidæ .....                     | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Gerridæ .....                      | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... |
| Cicadidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | 6   | ... | 5   | 1   | ... |
| <b>Hymenoptera—</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Formicidæ .....                    | ... | 1   | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | 1   | ... |
| Apidæ .....                        | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| Ichneumonidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| Tenthredinidæ .....                | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Thynnidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | 1   | 1   | 1   |
| Vespidæ, etc. ....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| <b>Orthoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Acrididæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Gryllidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Blattidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Trichoptera</b> .....           | 17  | 7   | 124 | 6   | 27  | 4   | 49  | 217 | 63  | 4   | ... | ... | 11  | ... | 14  | ... | 16  |
| <b>Lepidoptera</b> .....           | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | 1   | ... | ... | ... | ... | ... |
| <b>Odonata—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Anisoptera .....                   | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | 1   | ... | 1   | ... | 1   | ... | ... |
| Zygoptera .....                    | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Ephemeroptera</b> .....         | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| <b>Neuroptera</b> .....            | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Diptera—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Tachinidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tipulidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | 1   | ... | ... |
| Mycetophyllidæ .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | 1   | ... | ... | ... | ... | ... |
| Stratiomyidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Asilidæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   |
| Bombylidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Bibionidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Unidentifiable .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Perlaria</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Isoptera</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Miscellaneous Insects</b> ..... | ... | *   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | *   | *   |
| <b>Arachnida—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Araneidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   |
| Acarina .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Vermes</b> .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | 1   | ... |
| <b>Amphibia</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Reptilia</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Crustacea</b> .....             | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | 1   | ... | ... | ... | ... | ... | ... |
| <b>Miscellaneous</b> .....         | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |

\* Indicates presence.

**Summary of Stomach Contents of Brown Trout (*Salmo fario* Linnæus)—continued.**

| Stomach No. ....                   | 35  | 36  | 37  | 38  | 39  | 40  | 41  | 42  | 43  | 44  | 45  | 46  | 47  | 48  | 49  | 50  | 51  |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Coleoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Scarabæidæ .....                   | 10  | 4   | 19  | 31  | 8   | 2   | 27  | 2   | 22  | 63  | 2   | 12  | 2   | ... | ... | ... | 1   |
| Elateridæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | 1   | 1   | ... | ... | ... | ... | ... |
| Chrysomelidæ .....                 | 1   | ... | ... | ... | ... | ... | ... | ... | 1   | 1   | ... | 2   | ... | ... | ... | ... | 2   |
| Curculionidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3   |
| Dryopidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Carabidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Histeridæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lamproyridæ .....                  | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tenebrionidæ .....                 | ... | ... | 2   | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Buprestidæ .....                   | ... | ... | ... | ... | ... | ... | ... | ... | 1   | 1   | ... | ... | ... | ... | ... | ... | ... |
| Dytiscidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Gyrinidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cistelidæ .....                    | ... | ... | 1   | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Cleridæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Hydrophilidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Rhipidoceridæ .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Unidentifiable .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Hemiptera—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Pentatomidæ .....                  | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Reduviidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Jassidæ, etc. ....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2   |
| Capsidæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | 1   | ... | ... | 12  | ... | ... |
| Coreidæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Gerardæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cicadidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Hymenoptera—</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Formicidæ .....                    | 1   | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Apidæ .....                        | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ichneumonidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tenthredinidæ .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Thynnidæ .....                     | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Vespidæ, etc. ....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Orthoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Acrididæ .....                     | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Gryllidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Blattidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Trichoptera</b> .....           | ... | ... | 3   | ... | ... | ... | ... | ... | 33  | 6   | 53  | 1   | 1   | ... | 11  | 2   | 6   |
| <b>Lepidoptera</b> .....           | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Odonata—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Anisoptera .....                   | 2   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Zygoptera .....                    | 5   | ... | ... | ... | 24  | ... | ... | ... | ... | ... | 3   | ... | ... | ... | ... | 2   | ... |
| <b>Ephemeroptera</b> .....         | 4   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... |
| <b>Neuroptera</b> .....            | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Diptera—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Tachnidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tipulidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Mycetophyllidæ .....               | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... |
| Stratiomyidæ .....                 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Asilidæ .....                      | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... |
| Bombylidæ .....                    | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Bibionidæ .....                    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Unidentifiable .....               | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Perlaria</b> .....              | ... | 2   | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Isoptera</b> .....              | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Miscellaneous Insects</b> ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... | *   | *   | ... | ... | ... | ... | ... | ... |
| <b>Arachnida—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Araneidæ .....                     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| Acarina .....                      | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Vermes</b> .....                | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Amphibia</b> .....              | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Reptilia</b> .....              | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... |
| <b>Crustacea</b> .....             | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| <b>Miscellaneous</b> .....         | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | *   |

\* Indicates presence.

Summary of Stomach Contents of Brown Trout (*Salmo fario* Linnæus)—continued.

| Stomach No. ....                   | 52  | 53  | 54  | 55  | 56  | 57  | 58  | 59  | 60  | 61  | 62  | 63  | 64  | 65  | 66  | 67  | Total. |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| <b>Coleoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |
| Scarabæidæ .....                   |     |     | 4   | 1   | 1   | 18  | 4   | ... | ... | ... | ... | ... | ... | 17  | 1   | 1   | 475    |
| Elateridæ .....                    |     |     | ... | ... | ... | ... | 1   | 1   | ... | ... | ... | ... | ... | ... | ... | ... | 22     |
| Chrysomelidæ .....                 |     |     | ... | ... | ... | ... | 1   | 1   | ... | ... | ... | ... | ... | ... | ... | ... | 62     |
| Curculionidæ .....                 |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2      |
| Dryopidæ .....                     |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4      |
| Carabidæ .....                     |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| Histeridæ .....                    |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| Lampyridæ .....                    |     |     | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3      |
| Tenebrionidæ .....                 |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5      |
| Buprestidæ .....                   |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2      |
| Dytiscidæ .....                    |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| Gyrinidæ .....                     |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2      |
| Cistellidæ .....                   |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3      |
| Cleridæ .....                      |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| Hydrophilidæ .....                 |     | 1   | ... | ... | ... | ... | ... | ... | ... | 1   | 1   | ... | ... | ... | ... | ... | 6      |
| Rhipidoceridæ .....                |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| Unidentifiable .....               |     | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| <b>Hemiptera—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |
| Pentatomidæ .....                  |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3      |
| Reduviidæ .....                    |     |     | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| Jassidæ, etc. ....                 |     |     | 2   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8      |
| Capsidæ .....                      |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| Corixidæ .....                     |     |     | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | 2   | ... | ... | ... | 31     |
| Gerridæ .....                      |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2      |
| Cicadidæ .....                     |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 14     |
| <b>Hymenoptera—</b>                |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |
| Formicidæ .....                    |     |     | ... | ... | 36  | 2   | 8   | ... | ... | ... | ... | ... | 1   | ... | 1   | ... | 73     |
| Apidæ .....                        |     |     | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4      |
| Ichneumonidæ .....                 |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2      |
| Tenthredinidæ .....                |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2      |
| Thynnidæ .....                     |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4      |
| Vespidæ, etc. ....                 |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3      |
| <b>Orthoptera—</b>                 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |
| Acrididæ .....                     |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | 4      |
| Gryllidæ .....                     |     |     | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4      |
| Blattidæ .....                     |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| <b>Trichoptera</b> .....           | 10  | 5   | ... | ... | 13  | 7   | 52  | ... | 1   | ... | 23  | ... | 1   | ... | ... | ... | 842    |
| <b>Lepidoptera</b> .....           | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | 1   | ... | ... | 8      |
| <b>Odonata—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |
| Anisoptera .....                   |     |     | ... | ... | 1   | ... | 1   | ... | 3   | ... | 1   | ... | 3   | ... | ... | 1   | 33     |
| Zygoptera .....                    |     |     | ... | ... | 8   | ... | 8   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 74     |
| <b>Ephemeroptera</b> .....         |     |     | ... | ... | 2   | ... | 3   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 31     |
| <b>Neuroptera</b> .....            |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| <b>Diptera—</b>                    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |
| Tachinidæ .....                    |     |     | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| Tipulidæ .....                     |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| Mycetophyllidæ .....               |     |     | 4   | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8      |
| Stratiomyidæ .....                 |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2      |
| Asilidæ .....                      |     |     | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2      |
| Bombylidæ .....                    |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3      |
| Bibionidæ .....                    |     |     | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| Unidentifiable .....               |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | 3      |
| <b>Perlaria</b> .....              |     |     | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4      |
| <b>Isoptera</b> .....              |     |     | ... | ... | ... | 19  | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 21     |
| <b>Miscellaneous Insects</b> ..... |     |     | ... | ... | ... | *   | *   | *   | ... | ... | ... | ... | ... | ... | ... | ... | *      |
| <b>Arachnida—</b>                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |
| Araneidæ .....                     |     |     | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6      |
| Acarina .....                      |     |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| <b>Vermes</b> .....                |     |     | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 7      |
| <b>Amphibia</b> .....              |     | 2   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4      |
| <b>Reptilia</b> .....              |     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1      |
| <b>Crustacea</b> .....             |     | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | 4      |
| <b>Miscellaneous</b> .....         | *   | ... | ... | ... | ... | ... | *   | ... | ... | ... | ... | ... | ... | ... | ... | ... | *      |

\* Indicates presence.



**Stomach Contents of Loch Leven Trout.***(Salmo levenensis Walker.)***Tuross River.**

- No. 1.—♀,  $1\frac{1}{2}$  lb.; 16 February, 1935, 11 a.m. Collected by Dr. A. J. Spiller Brandon. Fly: Pennell Hackle. Coleoptera: 1 Clerid beetle (? gen. et sp.). Hemiptera: 3 Tree-hoppers (*Eurymela* sp.). Hymenoptera: 1 Ichneumon wasp (? gen. et sp.), 1 Eumenid wasp (? gen. et sp.), 1 wasp (Vespidæ; ? gen. et sp.), 1 Braconid wasp (? gen. et sp.). Odonata: wings of Zygopterid dragonflies. Ephemeroptera: wings of mayflies. Diptera: 164 Mycetophyllid midges (? gen. et sp.). Thysanoptera: 1 Giant Thrips (*Idolothrips spectrum*). Araneidæ: 1 spider (*Epeira* sp.). Amphibia: 1 frog.

**Lithgow District.**

- No. 2.—♂,  $\frac{3}{4}$  lb.; 20 March, 1935. Fish River. Collected by Lithgow Trout Fishermen's Association.—Orthoptera: 1 long-horned grasshopper (? gen. et sp.). Trichoptera: 2 caddis-cases (sand).
- No. 3.—♀, 1 lb.; 20 March, 1935. Fish River. Collected by Lithgow Trout Fishermen's Association.—Hymenoptera: 20 winged ants (*Iridomyrmex* sp.), 1 bee (*Anthophora* sp.). Orthoptera: 1 long-horned grasshopper (Tettigoniidæ), 1 grasshopper (Acridiidæ; *Chortoicetes* sp.). Trichoptera: 4 caddis-cases (sand). Ephemeroptera: 1 mayfly and remains of others. Vermes: 2 Gordian worms. Miscellaneous: quantity of feathers.
- No. 4.—♀,  $\frac{3}{4}$  lb.; 20 March, 1935. Fish River. Collected by Lithgow Trout Fishermen's Association.—Hymenoptera: 1 winged ant (*Iridomyrmex* sp.). Orthoptera: 1 grasshopper (Acridiidæ; ? gen. et sp.). Miscellaneous insects: small quantity of insect remains. Vermes: 1 small Gordian worm. Miscellaneous: 1 feather. Vegetable matter: 2 pieces of stick measuring 1 inch in length.
- No. 5.—♀,  $\frac{1}{2}$  lb.; 26 December, 1934. Tarana Quarries. Collected by Lithgow Trout Fishermen's Association.—Trichoptera: 13 caddis-cases (sand).
- No. 6.—♀,  $\frac{1}{2}$  lb.; 26 December, 1934. Tarana Quarries. Collected by Lithgow Trout Fishermen's Association.—Coleoptera: remains of small beetle (? gen. et sp.).
- No. 7.—♀,  $\frac{3}{4}$  lb.; 26 December, 1934. Tarana Quarries. Collected by Lithgow Trout Fishermen's Association.—NOTE: empty.
- No. 8.—♂,  $\frac{3}{4}$  lb.; 22 December, 1934. Sodwalls Creek. Collected by Lithgow Trout Fishermen's Association.—Coleoptera: 1 small *Heteronyx* sp. Ephemeroptera: 10 mayflies.

**Summary of Stomach Contents of Loch Leven Trout (*Salmo levenensis* Walker).**

| Stomach No. ....                   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | Total. |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| <b>Coleoptera—</b>                 |     |     |     |     |     |     |     |     |        |
| Scarabæidæ .....                   | ... | ... | ... | ... | ... | ... | ... | 1   | 1      |
| Cleridæ .....                      | 1   | ... | ... | ... | ... | ... | ... | ... | 1      |
| Unidentifiable .....               | ... | ... | ... | ... | ... | 1   | ... | ... | 1      |
| <b>Hemiptera—</b>                  |     |     |     |     |     |     |     |     |        |
| Jassidæ, etc. ....                 | 3   | ... | ... | ... | ... | ... | ... | ... | 3      |
| <b>Hymenoptera—</b>                |     |     |     |     |     |     |     |     |        |
| Formicidæ .....                    | ... | ... | 20  | 1   | ... | ... | ... | ... | 21     |
| Apidæ .....                        | ... | ... | 1   | ... | ... | ... | ... | ... | 1      |
| Ichneumonidæ .....                 | 1   | ... | ... | ... | ... | ... | ... | ... | 1      |
| Vespidæ, etc. ....                 | 2   | ... | ... | ... | ... | ... | ... | ... | 2      |
| Braconidæ .....                    | 1   | ... | ... | ... | ... | ... | ... | ... | 1      |
| <b>Orthoptera—</b>                 |     |     |     |     |     |     |     |     |        |
| Acrididæ .....                     | ... | ... | 1   | 1   | ... | ... | ... | ... | 2      |
| Tettigoniidæ .....                 | ... | 1   | 1   | ... | ... | ... | ... | ... | 2      |
| <b>Trichoptera</b> .....           | ... | 2   | 4   | ... | 13  | ... | ... | ... | 19     |
| <b>Odonata—</b>                    |     |     |     |     |     |     |     |     |        |
| Zygoptera .....                    | *   | ... | ... | ... | ... | ... | ... | ... | *      |
| <b>Ephemeroptera</b> .....         | ... | ... | 1   | ... | ... | ... | ... | 10  | 11     |
| <b>Diptera—</b>                    |     |     |     |     |     |     |     |     |        |
| Mycetophyllidæ .....               | 164 | ... | ... | ... | ... | ... | ... | ... | 164    |
| <b>Thysanoptera</b> .....          | 1   | ... | ... | ... | ... | ... | ... | ... | 1      |
| <b>Miscellaneous Insects</b> ..... | ... | ... | ... | *   | ... | ... | ... | ... | *      |
| <b>Arachnida—</b>                  |     |     |     |     |     |     |     |     |        |
| Araneidæ .....                     | 1   | ... | ... | ... | ... | ... | ... | ... | 1      |
| <b>Vermes</b> .....                | ... | ... | 1   | 1   | ... | ... | ... | ... | 2      |
| <b>Amphibia</b> .....              | 1   | ... | ... | ... | ... | ... | ... | ... | 1      |
| <b>Miscellaneous</b> .....         | ... | ... | *   | *   | ... | ... | ... | ... | *      |

\* Indicates presence.

