

024-1700 (24-1700) Ellis Rutter Stream Sampler

Warranty and Parts:

We replace all missing or defective parts free of charge. For additional parts or accessories, we accept Mastercard, Visa, American Express, institutional P.O.'s. All products guaranteed free from defect for 90 days. This guarantee does not include accident, misuse, or normal wear and tear.

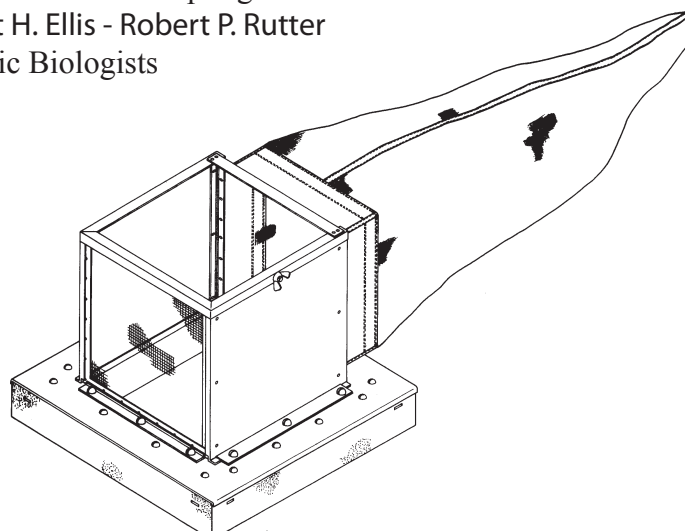
Safety:

To prevent injury, keep hands and feet clear of the sampler bottom when placing in the stream.

Introduction:

There is increasing evidence that the Surber-type benthic samplers presently accepted as a standard sampling device by many ecologists, greatly underestimates invertebrate standing crops. The primary advantage of the Surber-type sampler is its portability. We have developed, after months of field trials and testing, a sampler that is more efficient, more versatile and completely portable. The Ellis-Rutter incorporates a polyfoam base that conforms to a variety of substrates and prevents the loss of invertebrates under the sides of the sampler. In addition, the four-sided construction prevents loss of organisms due to backwash, a major problem with open-sided samplers. We feel that this sampler will fill the needs of a science that is demanding increased accuracy in quantitative benthic sampling.

Robert H. Ellis - Robert P. Rutter
Aquatic Biologists



- Samples a full 0.1 m² (1.1 ft²) - **larger** than the standard surber
- Weight: 12 lbs (5.4 kg) - easy to carry
- Net slides out for cleaning. Assembles easily in field.
- Polyfoam base conforms to a variety of substrates
- Stable enough to sample depths of 10 cm or more
- Nitex® monofilament net available in many mesh sizes
- Made-to-Order nets available
- Comes with 7.6 cm polyester foam pad in 500 µm mesh
- Replacement foam pads and nets available
- Design by permission of Robert Ellis and Robert Rutter

P/N 24-1700

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How To Use:

1. With the screen end facing upstream to permit water flow through the sampler, the Ellis-Rutter is brought down quickly to prevent the escape of rapidly moving organisms (e.g. crayfish and certain mayfly nymphs),
2. Once the sampler is positioned on the stream bottom, the collector either kneels on the sides of the base or sits on the top-brace which presses the polyfoam pad against the substrate and prevents the loss of animals from beneath the sampler.
3. Larger components of the substrate are washed within the box; water flowing through the sampler carries dislodge organisms into the net.
4. Remaining sediments can be agitated vigorously without the risk of animal loss due to backwash or sampler movement.
5. If water flow is too rapid and apt to carry sand or gravel into the net, flow through the sampler can be reduced by placing previously cleaned rocks in front of the screen.
6. If water level is too low to allow continuous flow through the sampler, substrate can be washed as above and water hand-splashed into the net.
7. When sampling is completed, net slides out for easy cleaning.
8. To convert sample values to values per m² simply multiply by 10.

Ellis-Rutter Stream Samplers and accessories

17-A32	363 µm Nitex®	Ellis-Rutter
17-A52	500 µm Nitex®	Ellis-Rutter
17-A62	600 µm Nitex®	Ellis-Rutter
17-A82	1000 µm Nitex®	Ellis-Rutter

Ellis-Rutter nets and accessories:

17-A35	<i>Net only,</i>	363 µm Nitex®
17-A55	<i>Net only,</i>	500 µm Nitex® (EPA)
17-A65	<i>Net only,</i>	600 µm Nitex®
17-A85	<i>Net only,</i>	1000 µm Nitex®
39-B10	Flow meter	
39-B15	Flow meter extension rod	for streams

Similar products from **Wildlife Supply:**

Surber samplers

- For shallow streams less than 18"
- Available with your choice of Nitex® net

Hess Stream Samplers

- For sampling in gravel, cobble bottoms
- With two penetration depths
- Rounded handles are easy to use
- Available in your choice of Nitex® mesh



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	Numerical standing crop estimates of benthic macroinvertebrates (all aquatic life stages combined) based on a sample of six observations (n = 6) taken with Ellis-Rutter and a sample of six observations (n = 6) with Surber Sampler.							
	Ellis-Rutter Sampling Unit = 0.10 m ²				Surber Sampling Unit = 0.083 m ² (1.00 ft ²)			
	Total # from size observations 0.60 m ²	Mean # per sampling unit	Range	Number per m ²	Total # from size observations 0.60 m ²	Mean # per sampling unit	Range	Number per m ²
Platyhelminthes								
Dugesia	116	19.3	4 - 50	190	48	19.3	1 - 15	86
Nemertea								
Prostoma	9	1.5	0 - 4	15	8	1.5	0 - 4	14
Aschelminthes								
Nematoda	5	0.8	0 - 4	8	---	0.8	----	---
Annelida								
Lumbricidae	4	0.7	0 - 3	7	1	0.7	0 - 1	2
Tubificidae	29	4.8	0 - 17	48	9	4.8	0 - 4	16
Lumbriculidae	23	3.8	0 - 17	38	8	3.8	0 - 3	14
Helobdella	---	---	---	---	2	---	0 - 1	3
Mooreobdella	2	0.3	0 - 1	3	---	0.3	----	----
Arthropoda								
Hydracarina	23	3.8	0 - 12	38	6	3.8	0 - 2	11
Assellus	1	0.2	0 - 1	2	---	0.2	----	---
Caenis	7	1.2	0 - 4	12	1	1.2	0 - 1	2
Tricorythodes	7	1.2	0 - 4	12	5	1.2	0 - 2	9
Baetis	519	86.5	8 - 325	865	144	86.5	11 - 46	258
Isonychia	4	0.7	0 - 2	7	---	0.7	----	---
Argia	5	0.8	0 - 3	8	---	0.8	----	---
Chimarra	216	36.0	7 - 71	360	143	36.0	5 - 64	256
Hydropsyche	1,327	221.2	38 - 393	2,212	876	221.2	72 - 272	1,570
Cheumatopsyche	4,419	736.5	146 - 1,006	7,365	1,720	736.5	214 - 436	3,082
Hydroptila	57	9.5	0 - 27	95	16	9.5	0 - 11	29
Leucotrichia	52	8.7	0 - 19	87	4	8.7	0 - 1	8
Oecetis	1	0.2	0 - 1	2	---	0.2	----	---
Paragractis	7	1.2	0 - 2	12	12	1.2	0 - 6	22
Psephenus	38	6.3	1 - 22	63	28	6.3	2 - 11	50
Ectopria	1	0.2	0 - 1	2	---	0.2	----	---
Enochrus	2	0.3	0 - 2	3	---	0.3	----	---
Dubiraphia	1	0.2	0 - 1	2	---	0.2	----	---
Stenelmis	2,015	335.8	233 - 449	3,358	796	335.8	48 - 197	1,426
Optioservus	3	0.5	0 - 2	5	---	0.5	----	---
Microcylloepus	4	0.7	0 - 3	7	---	0.7	----	---
Antocha	2	0.3	0 - 1	3	---	0.3	----	---
Simulium	98	16.3	2 - 32	163	42	16.3	1 - 28	75
Hemerodromia	2	0.3	0 - 1	3	1	0.3	0 - 1	2
Chironomidae	4,689	781.5	489 - 1182	7,815	2,324	781.5	31 8 - 487	4,164
Mollusca								
Ferrissia	7	1.2	0 - 3	12	3	1.2	0 - 3	5
Sphaerium	12	2.0	0 - 7	20	13	2.0	0 - 7	5

Both samples were taken from a single riffle in East Branch Perkiomen Creek, a tributary of the Schuylkill River in southeastern Pennsylvania, 27 July 1973. Ellis-Rutter and Surber samples were taken side by side in areas of similar substrate and flow. Water depth 15-25 cm (6 - 10 inches). Sampling time for each of the 12 observations was 8 minutes. Samples were preserved in the field with 95% isopropanol and hand-sorted in the laboratory. Both samplers were equipped with 0.35 mm mesh nets.