On 20 April 1974 at 1645 hrs at the same location, but on a flat area of reef at 6 m depth, individuals of an unidentified species of *Thallasoma* (Labridae) were engaged in mass spawning similar to that described for *T. bifasciatum* by Feddern (1965). After the upward spawning rush and visible release of eggs and sperm by the wrasses, one to five individuals of *R. kanagurta* were observed within 5–15 sec to converge on the site of gamete release, open their mouths into the filter feeding attitude as shown in Fig. 1A, B and swim in rapid, tight circles through the area where the eggs and sperm were released. The filter feeding occurred for 10–30 sec. The fish then quickly left the area and assumed the normal mouth position. This predation on the freshly released eggs of *Thallasoma* sp. continued to occur after almost every spawning rush during 15 min of observation.

Specimens of *R. kanagurta* from the Seychelles Islands were examined at the Academy of Natural Sciences of Philadelphia (ANSP 103513). The gill rakers have fine, doubled bristles extending comblike from them. These fine bristles (0.12–0.13 mm apart and up to 1.4 mm in length) form a network easily capable of filtering objects the size of *Thallasoma* sp. eggs from water. Feddern (1965) reported the egg diameter of the western Atlantic *T. bifasciatum* as approximately 0.6 mm and the Pacific species concerned here is probably similar.

While general filter feeding is undertaken by *R. kanagurta*, the direct exploitation of newly released eggs of another species implies that visual or other clues are sufficient to guide individuals of this species to a concentrated, readily exploitable food source.

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ARTIFICIAL HYBRIDIZATION BETWEEN RAINBOW (*SALMO GAIRDNERI*) AND GOLDEN TROUT (*SALMO AGUABONITA*).—Numerous examples of interspecific hybridization between species of the subgenus *Parasalmo* have been reported both under artificial conditions and in nature (Miller, 1950; Needham and Gard, 1959; Rounsefell, 1962; Behnke, 1970). As might be suspected, the cases of hybridization under artificial conditions are far better documented since data on fertilization, hatching and survival can be more accurately recorded. Published reports of hybrids in nature usually have been limited to observations of increased phenotypic variability within populations where two *Parasalmo* species, originally allopatric, had been forced into sympatry (e.g., as in Shreck, 1969).

In this note, we report a fortuitous case, under artificial conditions, of hybridization between golden (*Salmo aguabonita* Jordan) and rainbow (*Salmo gairdneri* Richardson) trout. To our knowledge, it is the first report of hybridization between these two species where the parentage was known beyond doubt. Schreck (1969) and Behnke (pers. comm.) have described numerous cases of rainbow × golden hybridization occurring in nature.

The golden trout used were from live specimens collected from the Little Kern River basin, California, in August–September 1974, as part of a biochemical-genetic and cytotaxonomic study. Upon arrival to Davis several golden males were unusually brightly colored, and had enlarged testes containing milt even though the early summer spawning season for golden trout had passed (Curtis, 1935). Most of the golden females were either spawned out or had eggs tightly bound to the skein membrane.

During the first two weeks of October, several attempts were made to extract milt from the golden males, only one of which was successful. On 9 October, one golden male yielded ca. one milliliter of milt which was used to fertilize 50 eggs from a three year old rainbow female of the domesticated RTD strain (Gall, 1975). Repeated attempts to obtain eggs from other rainbow females on this day were unsuccessful. One week later, the same female was successfully stripped of ca. 1400 normal eggs.

The 50 fertilized eggs were water hardened and incubated at 12–13 C. In 14 days, 40 eyed eggs were observed, and in 23–24 days 39 of the embryos hatched. Of the eggs fertilized, 78% hatched, a figure similar to those reported

for hatching of golden × cutthroat (Gould, 1966) and anadromous rainbow × cutthroat hybrid embryos (G. C. Webb, *In* Needham and Gard, 1959). At the constant temperature of 12–13 C, the range of 510–550 temperature units from fertilization to hatch for the hybrid embryos is well within the range for golden × golden and rainbow × rainbow embryos (Curtis, 1935).

After 36 days, 38 of the alevins had completely absorbed their yolk sac and commenced swimming. In the ensuing month 32 of the hybrid fry died. During this time period several sharp, intermittent temperature fluctuations (3–4 C) occurred at the hatchery as a result of successive power failures. Further, a severe incidence of bacterial gill disease broke out among the hatchery broodstock. Treatments with $CuSO_4$ plus salt and terramycin failed to reduce mortality among the hybrid fry.

In our opinion the severe mortality in the hybrid fry was due to these adverse environmental conditions; however the possibility that the hybrid zygote has limited viability should not be ignored. The six surviving hybrid fingerlings reached an average size of 3.5 cm fork length by 15 January, and were actively feeding. An attempt will be made to raise the hybrids to maturity and assess their fertility.

The above data, although limited, indicate a high degree of genomic compatibility between golden and rainbow trout. Although only one golden male could be spawned and his milt used to fertilize only 50 rainbow eggs, successful development to the fingerling stage was observed. Considering this and the adverse conditions to which the fry were exposed, it would appear that hybridization between the two species in nature could occur with ease. This supports the observations made by Schreck and Behnke (1971) and Gold and Gall (1975) from their studies of populations where rainbows had been introduced into the native range of the goldens.

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DISTRIBUTION AND KNOWN LIFE HISTORY OF *STICHAEUS PUNCTATUS* IN THE NORTHWEST ATLANTIC.—The Arctic shanny, *Stichaeus punctatus*, inhabits the northern seas on both sides of North America and the eastern coast of Asia (Leim and Scott, 1966). This paper consolidates the known and questionable distribution records of *S. punctatus* in the northwest Atlantic and eastern Arctic and presents observations on the life history of the species in Newfoundland.

In addition to data taken from preserved material, observations were made on living specimens in their natural habitat by means of SCUBA. Collections were made with rotenone or a slurp gun and dipnets, and the specimens preserved in 60% ETOH. Both scales and otoliths were used, where possible, for age determinations. Distributional data were obtained from the literature and from material in the Ichthyology Collection of the Memorial University of Newfoundland.

Both juvenile and adult specimens have been collected along the west coast of Greenland (Fabricius, 1780; Dresel, 1885; Jensen, 1944), northward along the Maritime coast of North America from as far south as Massachusetts (Collette and MacPhee, 1969; Schroeder, 1931;