

FISHES OF THE LOWER SUSQUEHANNA and Northern Chesapeake
Tributaries, Part IV

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Earlier installments of this series appeared in the Oct 86,
Mar-Apr 87, and Jan 88 issues.

COMELY SHINER (Notropis amoenus)

This graceful little fish is widely distributed in the lower Susquehanna drainage. It seems to occur in a wide range of stream types. We have found it in large numbers in a tiny tributary of the Conestoga Creek near Lancaster, Pa.; in the much larger West Branch of Octoraro Creek, Lancaster Cy.; in the Big Gunpowder River, Md.; and in the Susquehanna River just downstream from the Holtwood Dam on the York County, Pa. (west) side. It was always found in moderate to slack current where the water was clear and clean. We have not recorded it as frequently as other collection reports might lead one to expect; however, it is difficult to differentiate species of small shiners when a mass of them are writhing in a net, so it is likely that we have caught the species more than we realize.

Generally, Comely Shiners can be distinguished from other cyprinids by their rather delicate appearance and their slim, streamlined shape. They have a seamless, super-silvery shine to them, sometimes highlighted in the net by greenish or blue iridescence. They are more elongate than other shiners and there appears to be less curvature in their dorsal and ventral profiles. In our area, the most similar fish is the Rosyface Shiner (N. rubellus). Comelies can also be confused with young of some species.

As with most other members of its genus, the Comely Shiner is an excellent aquarium fish. It is hardy and readily takes flake foods as well as live and frozen foods. It is peaceful and attractive (older name: "Attractive Shiner," which translates amoenus), and tends to school with others of its kind. It is unlikely that the metallic sheen or brilliant color highlights would show in aquaria, though a sunlit tank might reveal them. Sometimes a green or gold iridescent mid-lateral stripe is visible, however.

We have had losses in transporting and acclimating these fish. Therefore, do not overcrowd or overheat them when transporting them--a source of cooling, such as ice, would not be amiss--and acclimate them to the tank very gradually. Once acclimated, they are hardy and "attractive" in the aquarium.

--WME

SATINFIN SHINER (Notropis analostanus) &
SPOTFIN SHINER (Notropis spilopterus)

Since these two species are said by ichthyologists to be virtually indistinguishable in the field while alive, they are treated together here. Vague methods of distinguishing will be suggested.

Both species are members of the subgenus Cyprinella. They have usual Cyprinella attributes: streamlined shape; great speed and swimming ability; prominent diamond-shaped scales. They can also be identified by feel: it's as though they were made of metal. Males of the two species have several things particularly in common during breeding season: whitish or yellowish fins, pearly bodies, and rough tubercles on the snout. Females are similar to each other, lacking high color.

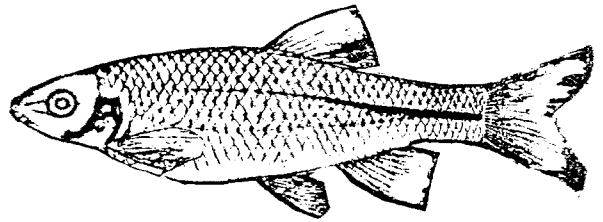
The anal-fin ray count differs--Satinfin 9, Spotfin 8. C.L. Smith in Inland Fishes of New York State says the Spotfin has 37-39 lateral-line scales, the Satinfin 35-37. The most definite distinction Smith asserts, which the authors have not yet tested, is that Satinfins have pigment scattered throughout the dorsal-fin membranes, while in the Spotfins it is confined to the black dashes between posterior dorsal rays.

The authors of this summary have their own method of telling the species apart--blind instinct. But between them they usually agree, so there might be something to their guesswork. First, a major habitat clue: adult Spotfins are more likely to inhabit small creeks, such as Kelly Run, Lancaster County, Pa.; adult Satinfins, large ones. The habitat distinction is not 100-percent, however. Second, we have found Satinfins only in the eastern part of this area--adjacent to the Delaware drainage, where we have never found Spotfins (though both species are said to be there too).

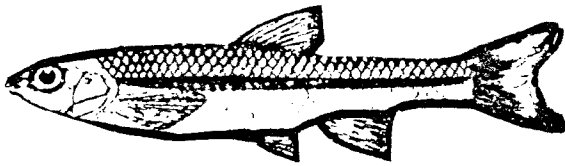
Now their looks. First, it appears that most fresh-caught Spotfins are slightly trimmer than Satinfins, possibly because they sometimes occur in great density; after a while in aquaria, Spotfins fatten and the distinction blurs. Second, one is more conscious of greenish overtones to the bodily iridescence of Spotfins, yellowish with Satinfins. Both may develop yellowish fins. Aside from looks, in aquaria one author (BG) has found Satinfins (males) slightly more assertive than Spotfins.

In breeding trim, the male Satinfin's beauty magnetizes--especially that dorsal fin with its silver-white iridescence, lit kaleidoscopically with iridescent hues--blue, blue-green, green, gold, bronze. Is there another fish in the world with this type and brilliance of color? The other fins are silvery-white at their tips. The diamond-scaled pearl-gray body also flashes other colors.

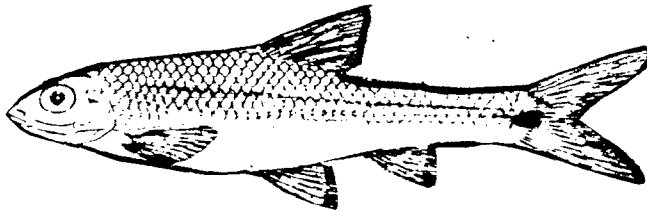
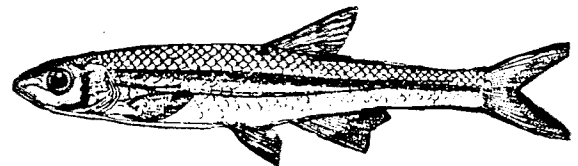
SPOTFIN OR SATINFIN? Virtually indistinguishable. (*Notropis spilopterus* or *analostanus*). Have "dashes" between back rays of dorsal. Males have whitish fins in breeding season.



SWALLOWTAIL SHINER (*N. procne*)
Straw-gold, "netted" back, dark stripe, white belly, small.



COMELY SHINER (*N. amoenus*).
Mid-lateral stripe dazzling silver, sometimes blue or green, when in net. Effect disappears in tank, but may have thin green or gold horizontal stripe.



Spottail Shiner (*N. hudsonius*)
inhabits many eastern, midwestern waters. Spot may not be too prominent in this area.

Sketches modified from those in Atlas, for hoped-for visibility and emphasizing special features.

A fantastic display is afforded by putting some male Satinfins in an aquarium with a dark background, then having them only dimly lit by distant room light behind the viewer. He sees only the brilliant iridescent fins slashing the black, tracing incredible acrobatics. Satinfins and Spotfins are two of the very best swimmers among native fishes. They make impossible moves at high speed, males sometimes chasing each other in tight circles, inseparable by human vision.

Frankly, we're not sure if we've ever seen a Spotfin male in prime breeding condition. There have been occasional males with yellow-white fins which were quite attractive, but we've never seen any as spectacular as Satinfins. The authors would be interested in reading good descriptions of breeding colors of male Spotfins.

Satinfins occur usually above the Fall Line from upper New York State to North Carolina. Spotfins are found over a much more extensive mid-east/midwest range. One of the authors (BG) has had several occasions to observe Satinfins in nature during spawning season (May-June +) in the Wissahickon Creek, Philadelphia (Delaware drainage). John Eccleston and John Clairmont have also witnessed this. Satinfins dominate the shallows, males everywhere taking up stations, sortieing from them to attract females. Their fin displays are something to behold, as the silver-white is visible at some distance. Peak condition is attained in late May in the Wissahickon, which is at about the same latitude as the Lower Susquehanna in Pennsylvania.

It's compulsory to have a couple pairs of these fish in aquaria during breeding season despite the minor inconveniences--i.e., males unmercifully pursue any fish that can't swim out of the way; mighty few can. That tendency is not restricted to breeding season, though it becomes more intense then. After a while, in fact, it may become wearing to watch them!

There's no problem feeding these fish. They need lots of fuel to maintain their high-energy life-style. One doesn't buy a Ferrari for fuel economy, does one? They love flake food, freeze-dried food, live food, frozen food--you serve it, they'll eat it.

At the start of aquarium life, they need lots of oxygen. They may be hard to transport home for that reason, so ice or some means of cooling is advisable. They soon adjust to reduced oxygen, however.

--BG

COMMON SHINER (Notropis cornutus)

The Common Shiner may be our most frequently seined cyprinid in the lower Susquehanna area. We have found it in nearly every stream large or small. A particularly likely place to look for Commons is a pool below a riffle where the water may be one to several feet deep and the current may flow with considerable force. In such a situation, the Common Shiner is often associated with the River Chub (Nocomis micropogon), Creek Chub (Semotilus atromaculatus), and Blacknose Dace (Rhinichthys atratulus).

When captured, larger Common Shiners are readily recognized by their deep, robust body, especially anteriorly. They are generally silvery, but sometimes show a brownish or olive back--or even blue-black in males. In the spring and early summer, adult males develop bright red fin edges and a steel-blue back, with a pink flush to lower body areas--certainly one of this area's most magnificent fishes. Usually only specimens of four inches and up develop full color, though smaller males may show some red in the fins. Commons commonly reach seven or eight inches.

Young fish lack the robust appearance of older ones. When viewed in the net, they exhibit subtle hues of metallic purple on their sides. These shades rarely show up in the aquarium.

Common Shiners grow remarkably quickly in aquaria, even with normal feedings. Over-wintered adults readily achieve spawning condition--down to the male's prominent tubercles--without special conditioning such as heavy feedings of live or frozen foods.

As community tank fish, Common Shiners are generally peaceful and rarely bother tankmates, even those much smaller. In full spawning condition, however, males can become a bit rammy, especially towards each other. Besides that, the Common Shiner's only drawbacks as aquarium fish are its relatively large size, plain silver color most of the year, and seemingly insatiable appetite.

--WME

SPOTTAIL SHINER (Notropis spilopterus)

The Spottail Shiner has been a puzzle to us. While it is commonly distributed throughout eastern (Delaware River drainage) and central (Susquehanna drainage) Pennsylvania, we have only rarely been aware of encountering this fish in either of these drainages. We did capture it in the West Branch of the Octoraro Creek, Lancaster County, Pa., in July, 1985 and November, 1987.

The caudal spot that names this fish is frequently absent or indistinct in Pennsylvania populations. Consequently, it is not always of practical value in field identification. When present, however, it is a clear, well-defined character useful for identification if not definitive. When viewed in the collecting net and when the caudal spot is either absent or indistinct, this fish resembles the Common Shiner (N. cornutus). That species, however, possesses a deeper, more robust anterior, whereas the Spottail Shiner is more streamlined.

In the aquarium, the Spottail has a white lower margin of the tail; this may not be so obvious in the field. In the collecting bag or aquarium, the Spottail Shiner displays a dusky lateral band absent in the Common Shiner. This band continues across the snout, and, in our area--especially in smaller fish--can easily cause confusion between the Spottail and the sympatric Swallowtail Shiner (N. procne). In the latter species, though, this band is cleaner and usually darker. We recently undertook identification of a fish pictured in a slide. Hudsonius or procne? We determined the former, based on the following distinctions:

TABLE I.

CHARACTERISTIC	SWALLOWTAIL	SPOTTAIL
DORSAL-FIN ORIGIN	Midway between caudal base and tip of snout	Much closer to tip of snout than to caudal base
DORSAL-FIN MARGIN	Straight	Concave
ANAL-FIN RAYS	7	8
ANAL-FIN ORIGIN VS. TIP OF DEPRESSED LAST DORSAL RAY	Slightly Ahead	Below

The above data were derived mainly from C.L. Smith's The Inland Fishes of New York State.

The Spottail Shiner makes a welcome addition to the native tank because it is a peaceful and, in its own way, attractive fish. It is also hardy, though it does require frequent feedings to maintain its body weight. Spottail Shiners are not particularly fussy feeders, but occasional generous feedings of frozen brine shrimp and bloodworms should supplement regular feedings of a high-quality flake food.

-WME

SWALLOWTAIL SHINER (Notropis procne)

This is a very common minnow in a variety of fast, clear stream habitats throughout the Lower Susquehanna region, as in the Delaware drainage just to the east. Until more colorful fishes became available, this was one of the area's popular commercial aquarium species in the early Nineteenth Century, according to Cope. Its early popularity was well deserved; this is about as beautiful as a plain-colored fish can be, because of its neat markings, graceful body, and swimming style. With a usual maximum size of about three inches, N. procne is a slender, silvery creature, the scales outlined darkly for a network effect. There is a rather thick mid-lateral stripe of variable intensity, blackest on males, sometimes invisible. In the former case, it often has a zig-zag look, resembling the stripe on a Lucania goodei. In sunlight, a gold or even purple stripe overlays the black one. An occasionally sunlit aquarium is therefore the best.

Swallowtails do well in aquaria, eating any fish food. They are not nasty to each other or other species, but descriptions of breeding procedure raise the possibility of a feisty period. Allegedly males stake out breeding territories and guard nest areas.

Well-marked males are easy to identify, but less distinct specimens can be confused with other fish, especially Spottail Shiners (see chart in account on that species) and Bluntnose Minnows (Pimephales notatus). The latter two share the variable black stripe, general outline, round or blunted nose, and, slightly, the networked scales. Closer inspection will reveal the prominent half-spine at the front of the dorsal fin on the Pimephales, which also has a rounder, plumper body.