



## California Grunion Spawning Runs

The California grunion (*Leuresthes tenuis*) is a member of the New World silversides family, Atheriniopsidae, along with the jacksmelt and topsmelt. Their usual range extends from Point Conception, California, to Point Abreojos, Baja California. Occasionally, they are found farther north, to Monterey Bay, California, and south to San Juanico Bay, Baja California. They inhabit the nearshore waters from the surf to a depth of 60 ft. Tagging studies indicate that they do not migrate.

Grunion are the object of a unique recreational fishery. These fish are famous for their remarkable spawning behavior, which evokes an "I don't believe it!" response from people when they see it or hear about it for the first time.

Grunion leave the water at night to spawn on beaches during the spring and summer months. For four consecutive nights, beginning on the nights of the full and new moons, spawning occurs after high tides and continues for several hours. As waves break on the beach, grunion swim as far up the slope as possible. The female arches her body and excavates the semi-fluid sand with her tail to create a nest. Twisting her body, she digs into the sand until half-buried with her head sticking out. She then deposits her eggs into the nest. Males curve around the female and release milt. The milt flows down the female's body until it reaches and fertilizes the eggs. As many as eight males may fertilize the eggs in a single nest. After spawning, the males immediately retreat toward the water while the female twists free and returns with the next wave. While spawning may only take 30 seconds, some fish remain stranded on the beach for several minutes.

Spawning occurs from March through August, and occasionally in February and September. Peak spawning occurs from late March to early June.



California grunion, *Leuresthes tenuis*  
illustration by P. Johnson

## California Grunion Life History Information

Mature grunion may spawn during successive runs, with females spawning up to six times each season. Females lay between 1,600 and 3,600 eggs during one spawn, with larger females producing more eggs.

Eggs are deposited during the highest tides of the month and incubate in the sand during the lower tides, when they will not be disturbed by wave action. The eggs are kept moist by residual water in the sand. They hatch about 10 days later, during the next high tide series, when they are inundated with sea water and agitated by rising surf.

Most of the grunion seen on southern California beaches are between 5 and 6 in. long, with some as long as 7 in. Grunion mature and spawn at the end of their first year. An average one-year-old male is 4½ in. long while a female of the same age is slightly larger at 5 in. At the end of two years, males average 5½ in. and females around 5¾ in. long. By the end of three years, an average male is nearly 6 in. and a female is a little over 6¼ inches in length. Few live to be more than three years old.

Grunion food habits are not well known. They have no teeth, so they are presumed to feed on very small organisms. Shorebirds, isopods, flies, sand worms, and beetles eat grunion eggs, while humans, larger fish, and other animals prey upon grunion.



### Help Wildlife Officers Put an End to Poaching

If you witness poaching or polluting, call  
**1-888-334-CALTIP**  
(1-888-334-2258)

Alternate communication formats of this document are available upon request. If reasonable accommodation is needed, call CDFW at (707) 964-5026. The California Relay Service for the deaf or hearing-impaired can be utilized from TDD phones at 1 (800) 735-2929.



California Department of Fish and Wildlife

## California Grunion Information



M. Brock

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## California Grunion

### Facts and Expected Runs



Despite local concentrations, grunion are not abundant. The most critical problem facing the grunion resource is the loss of spawning habitat caused by beach erosion, harbor construction, and pollution.

By the 1920s, the fishery was showing unmistakable signs of depletion. Regulations passed in 1927 established a closed season for three months, from April through June. The fishery improved and in 1947 the closure was shortened to April through May. This closure is still in effect to protect grunion during their peak spawning period.

During the open season, a fishing license is required for persons 16 years and older to capture grunion. Grunion may be taken by sport fishermen using their hands only. No holes may be dug in the beach to entrap grunion. There is no bag limit, but fishermen may take only what they can use—it is unlawful to waste fish. Under these regulations, the resource seems to be maintaining itself at a fairly constant level. While the population size is not known, all research points to a rather restricted resource that is appropriately harvested under existing law.

While grunion spawn on many beaches in southern California, the Department of Fish and Wildlife does not recommend any particular beach because of changing safety conditions and local curfews. One of the best ways to find out which beaches have had recent runs is to call the state and county beach lifeguards who can often tell if spawning has taken place. There is a grunion program offered to the public at Cabrillo Beach in San Pedro on several nights of the season. Call (310) 548-7562 for details. Additional grunion information and volunteer programs may be found at: [www.grunion.org](http://www.grunion.org).

OPEN SEASON

MARCH	
9 WEDNESDAY	9:45 p.m. - 11:45 p.m.
10 THURSDAY	10:20 p.m. - 12:20 a.m.
11 FRIDAY	11:05 p.m. - 1:05 a.m.
12 SATURDAY	11:50 a.m. - 1:50 a.m.
23 WEDNESDAY	10:20 p.m. - 12:20 a.m.
24 THURSDAY	10:45 p.m. - 12:45 a.m.
25 FRIDAY	11:10 p.m. - 1:10 a.m.
26 SATURDAY	11:35 a.m. - 1:35 a.m.

CLOSED FOR TWO MONTHS

JUNE	
5 SUNDAY	10:00 p.m. - Midnight
6 MONDAY	10:45 p.m. - 12:45 a.m.
7 TUESDAY	11:30 p.m. - 1:30 a.m.
8 WEDNESDAY	12:20 a.m. - 2:20 a.m.*
20 MONDAY	9:45 p.m. - 11:45 p.m.
21 TUESDAY	10:20 p.m. - 12:20 a.m.
22 WEDNESDAY	10:55 p.m. - 12:55 a.m.
23 THURSDAY	11:35 p.m. - 1:35 a.m.

JULY	
4 MONDAY	9:50 p.m. - 11:50 p.m.
5 TUESDAY	10:30 p.m. - 12:30 a.m.
6 WEDNESDAY	11:15 p.m. - 1:15 a.m.
7 THURSDAY	11:55 a.m. - 1:55 a.m.
19 TUESDAY	9:30 p.m. - 11:30 p.m.
20 WEDNESDAY	10:05 p.m. - 12:05 a.m.
21 THURSDAY	10:40 p.m. - 12:40 a.m.
22 FRIDAY	11:15 p.m. - 1:15 a.m.

AUGUST	
2 TUESDAY	9:35 p.m. - 11:35 a.m.
3 WEDNESDAY	10:15 p.m. - 12:15 a.m.
4 THURSDAY	10:55 a.m. - 12:55 a.m.
5 FRIDAY	11:30 p.m. - 1:30 p.m.
18 THURSDAY	9:55 p.m. - 11:55 p.m.
19 FRIDAY	10:35 p.m. - 12:35 a.m.
20 SATURDAY	11:25 p.m. - 1:25 a.m.

CLOSED SEASON OBSERVATION ONLY

APRIL	
7 THURSDAY	10:10 p.m. - 12:10 a.m.
8 FRIDAY	10:50 p.m. - 12:50 a.m.
9 SATURDAY	11:30 p.m. - 1:30 a.m.
10 SUNDAY	12:15 a.m. - 2:15 a.m.*
22 FRIDAY	10:05 p.m. - 12:05 p.m.
23 SATURDAY	10:30 p.m. - 12:30 a.m.
24 SUNDAY	10:55 p.m. - 12:55 a.m.
25 MONDAY	11:25 p.m. - 1:25 a.m.
MAY	
6 FRIDAY	9:40 p.m. - 11:40 p.m.
7 SATURDAY	10:20 p.m. - 12:20 a.m.
8 SUNDAY	11:05 p.m. - 1:05 a.m.
9 MONDAY	11:45 p.m. - 1:45 a.m.
21 SATURDAY	9:45 p.m. - 11:45 p.m.
22 SUNDAY	10:00 p.m. - Midnight
23 MONDAY	10:35 p.m. - 12:35 a.m.
24 TUESDAY	11:05 a.m. - 1:05 a.m.

Regarding This Schedule

The times given for each date reflect the **probable** two-hour interval during which a spawning run may occur. The second hour is usually better. The best runs normally occur on the second and third nights of a four-night period.

Times **through March 12 are Pacific Standard Time**. Thereafter, times are Pacific Daylight Savings Time. This schedule predicts grunion runs at Cabrillo Beach near the Los Angeles Harbor entrance. The timing of the runs varies at different places along the coast: San Diego runs occur about 5 minutes earlier and Santa Barbara runs occur about 25 minutes later than the times provided here.

REMINDER: During the open season, a California fishing license is required for persons **16 years and older**. Grunion may be taken by hand only. No holes may be dug in the beach to entrap them. There is no bag limit, but take only the fish you can use - it is unlawful and unethical to waste fish.

\* NOTE: Where the forecast run starts at or after midnight, the date of the previous evening is shown.

For a current schedule, send a self-addressed, stamp envelope to:

**GRUNION**  
California Department of Fish and Wildlife  
4665 Lampson Ave. Suite C  
Los Alamitos, CA 90720

Or download a schedule from the California Department of Fish and Wildlife website at

[wildlife.ca.gov/Fishing/Ocean/Grunion](http://wildlife.ca.gov/Fishing/Ocean/Grunion)

