# SEASONS OF BAY LIFE

San Francisco Bay, Pacific Coast

#### **MIGRATING SALMON**

Four different runs, or populations, of Chinook salmon spawn in the San Francisco Bay watershed, each named for the season when the majority of adults return from the ocean to freshwater streams to breed.

#### **WINTERING WATERBIRDS**

More than 700,000 ducks, swans, geese, and other waterfowl have been counted overwintering in San Francisco Bay and Delta. Most travel here for the season along the Pacific Flyway, a transcontinental avian thoroughfare stretching from Alaska's North Slope to Patagonia.

#### **BROWN PELICANS**

These majestic birds can be seen swooping around the Bay one behind another in undulating lines. In late fall, they head south for breeding rookeries in Baja, southern California, and Florida.

## **TRAVELLING PEEPS**

Diminutive Western sandpipers depart breeding grounds in Alaska and make the 1,800-mile flight to San Francisco Bay each fall in pursuit of a snow-free winter. They forage for food along mudflats and salt ponds (males use a bristle-shaped tongue to lap up diatom goo).

## **LEOPARD SHARKS GIVE BIRTH**

Females that have hatched their eggs safely within their own bodies swim into eelgrass beds to give birth to two dozen or so wriggly pups. Births coincide with the most luxuriant growth of eelgrass, making this tidal nursery a safer place for young sharks to hide.

## **WATERBIRDS NEST ON ALCATRAZ**

The Rock — inaccessible to predators and close to seafood-rich waters — is considered a choice residence by ground-nesting Western gulls, three species of cormorants (double-crested, Brandt's, and pelagic), and pigeon guillemots.

#### **HARBOR SEALS PUP**

Mothers give birth to spotted, nickel-gray pups at haul out sites along mudflats, rocky intertidal zones, islands, and sandy pocket beaches.

## **HERRING SPAWN**

Pacific herring stream through the Golden Gate by the millions and deposit their tiny orange eggs on every available surface, from eelgrass strands to pier pilings — a seafood smorgasbord for gulls, ducks, and sturgeon who slurp up more than 95 percent of each egg batch laid.

## **AMERICAN AVOCET CHICKS HATCH**

These speckled balls of fluff are able to run within a few hours of hatching, and pick through the mud, snapping at food on comically stilt-like legs behind their elegant, rose-tinged parents.

## **CALIFORNIA LEAST TERNS BREED IN ROOKERIES**

Endangered California least terms settle down to raise their chicks on open shoreline such as the abandoned runways of Alameda Naval Air Station. Parents stuff their young with anchovies and smelt.

# **CLAPPER RAIL BREEDING SEASON**

These endangered birds build nests amid the cordgrass of the low marsh, taking advantage of its spring and summer growth spurt to hide their young from predators. Birds race to avoid the ultra-high king tides during the same period, which can swamp eggs.

# **PHYTOPLANKTON BLOOMS**

An influx of nutrients from the ocean, combined with clearer surface waters and more sunlight, causes phytoplankton to multiply in blooms that may cover many square miles. The largest blooms once regularly occurred in spring; recent years have seen blooms nearly year round.

## **SUMMER PETALS IN THE MARSH**

Longer days trigger gumplants to unfurl bright yellow flowers along many tidal marshes. The flower heads produce a sticky white resin that often varnishes the entire plant.

## **EELGRASS FLOWERS**

Warming water temperatures are among several cues that trigger eelgrass to produce flowers within sheaths called spathes. The resulting ripe fruits, which resemble grains of wheat, are most available in July and August.

Feb June July Aug Dec

# River inflows, food supply and conditions in the water all affect the cycles of Bay life...







