

A Field Guide to Pre-molt Green Crabs

PURPOSE

The purpose of this field guide is to help identify pre-molt European green crabs (*Carcinus maenas*) in New England. The key to a successful soft-shell crab fishery is identifying pre-molt crabs and holding them until they molt.

SIGNS

Subtle changes in color along the margins of the ventral episternites (platelets) indicate that the crab is likely to molt in the next several weeks (see 2). Males are more likely to molt in synchrony in the spring (May-July). Imminent-molt crabs (likely to molt within 1-3 days) lose the shadowy line on the margins of the ventral plates, their color fades and becomes more opaque, and they become lethargic. The abdomen also becomes brittle on the posterior end where it wraps around and meets the carapace. Imminent-molt crabs must be checked daily for molting. Once a crab molts, it must be removed from the water and chilled within 6-18 hours, otherwise the new shell will begin to harden.

SIZE MATTERS

For soft-shell crabs, the target size is 45-65 mm. Large-old male crabs seldom molt. Medium males are the best because they are still actively molting and they are worth more money than small males.

THE ITALIAN CONNECTION

The Venetian crab (*C. aestuarii*) sets the standard for molting signs in the European green crab (*C. maenas*) of New England.

MOLTING SEQUENCE TERMINOLOGY

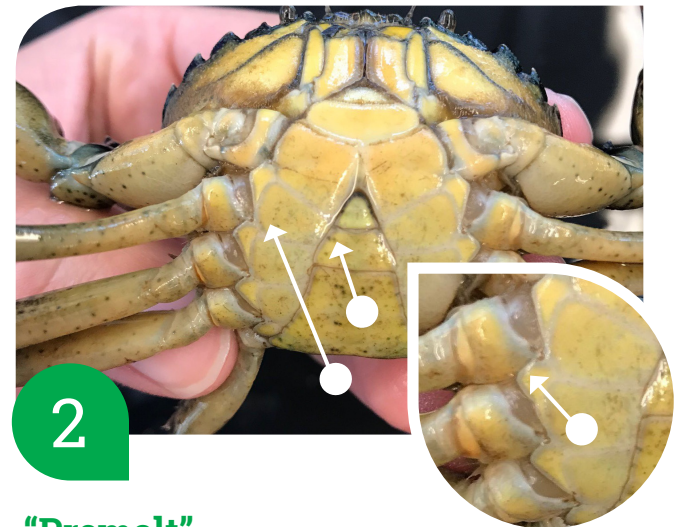
Most trapped crabs are in the “intermolt” phase. They are not good for the soft-shell fishery and can be discarded. “Pre-molt” crabs are of interest for holding until they become “imminent” molts and then finally molted “soft-shell” crabs. The challenge is to figure out which of these 4 types you are holding in your hand.



“Intermolt”

“Intermolt” crabs are hardshelled, in-between molts and not good for the softshell fishery. The key is to identify and select out the “pre-molts” (see 2) from a large catch of “intermolts.” (*C. maenas*).

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| 1 | “INTERMOLT” CRAB
no signs of molt, or molted recently and hard-shell again. Not of interest. |
| 2 | “PRE-MOLT” CRAB
signs of molt in the next 1-3 weeks. |
| 3 | “IMMINENT-MOLT” CRAB
molting in the next 1-3 days. |
| 4 | “SOFT-SHELL” CRAB
just molted in the last 24 hrs, market product. |



“Premolt”

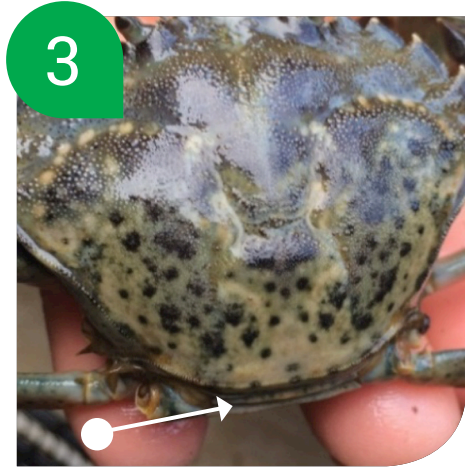
“Pre-molt” crabs are 1-3 weeks from molting. These crabs have a thin white line and blue-green shadow on the margins of their adominal platelets (note arrows). This sign is best observed in the shade (not sun). These crabs should be kept aside and monitored daily for signs of “imminent” molt—see 3 on reverse). (*C. aestuarii*).

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"Imminent"

The carapace of crabs likely to molt in the next 1-3 days looks cloudy and washed out on the back (dorsal side). Where the abdomen meets the carapace, the crab is soft to the touch (see arrows). (*C. maenas*).

Note the pale, washed out look of the abdomen and platelets of an "imminent" molt crab. The shadowy white line on the ventral side of "pre-molts" shown in 2 is faded or lost. Often "imminent molt" crabs are lethargic. (*C. aestuarii*).



MOLTING

Note loss of color in the old shell, and the significantly more vivid color of the "new" crab.

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"Soft-shell"

Desired product! Crabs that are soft-shell (molted in the last 12-24 hours) are obvious because (1) they are soft to the touch, and (2) typically bright green or yellow-green. They should be removed from water and put on ice immediately to prevent shell hardening.



MORE PRE-MOLT EXAMPLES



OTHER THINGS TO KNOW



FEMALE

The abdomen is much rounder and broader on a female than a male.



MALE

Note the pointed, spear-shaped abdomen of the male.



FEMALE WITH EGGS

Eggs are held under the abdomen. Females can carry up to 165,000 eggs at one time.