CAULERPA

SPECIES IDENTIFICATION KEY

United States Law: It is illegal to import or transport Caulerpa taxifolia aquarium strain across state lines including internet sale (Federal Noxious Weed Act, 1999; and Federal Plant Protection Act, 2000).

California State Law: It is illegal to possess, transport, transfer, release alive, import, or sell Caulerpa taxifolia, Caulerpa sertularioides, Caulerpa mexicana, Caulerpa ashmeadii, Caulerpa scalpelliformis, Caulerpa racemosa (and all varieties of C. racemosa), Caulerpa cupressoides, Caulerpa verticillata, Caulerpa floridana (California Fish and Game Code 2300).

City of San Diego Law: Bans the possession, sale, and transport of all Caulerpa species within city limits (City of San Diego Ordinance 18967)

We designed this key to distinguish between Caulerpa species commonly found in the aquarium trade. Many Caulerpa species found in the wild were not included in this publication.

Have you seen these invaders?
Red borders around photographs note species banned in the state of California

**Feather**

*Caulerpa ashmeadii*
- Frond: feather-like (up to 20cm tall)
- Branchlet: cylindrical with blunt tips (7-16mm long), opposite each other along central axis
- Central Axis: cylindrical

*Caulerpa mexicana*
- Frond: feather-like (2-2.5cm tall)
- Branchlets: opposite each other; flattened, curved upward, pointed tip (2-4mm wide, 2-10mm long)
- Central Axis: flat (1-3mm wide)

*Caulerpa serrularioides*
- Frond: feather-like (up to 20cm tall)
- Branchlets: opposite each other; needle shaped, pointed at the tip (2-4mm wide)
- Central Axis: cylindrical (1-1.5mm in diameter)

*Caulerpa scalpelliformis*
- Cold water southern Australian species not found in the aquarium trade, but is included in this key because it is banned in the state of California

**Grape**

*Caulerpa racemosa*
- Frond: grape-like (1-5cm tall)
- Branchlets: spherical to club shaped, sometimes crowded along central axis (2-4mm in diameter), does not have constriction at base
- Stalk: (2-5mm long)

*Caulerpa racemosa var. cylindracea*
- Frond: grape-like (up to 10cm tall, but can be found as tall as 20cm)
- Branchlets: radially distributed to alternately opposite

*Caulerpa racemosa var. lamourouxii*
- Fronds: grape-like to flat (10-15cm tall)
- Branchlets: club shaped (2-7mm diameter) to no branchlets
- Central Axis: flattened
- Stalk: (2-3mm long)

*Caulerpa macrophysa*
- Frond: grape-like (up to 6cm tall)
- Branchlets: spherical (3-7mm in diameter), often in clusters

*Caulerpa microphysa*
- Frond: grape-like (up to 30mm tall)
- Branchlets: bead shaped, spherical (1.5-2.3 mm wide), base is constricted
Caulerpa brachypus
Frond: flat, small delicate blades (1-3cm tall, 3-5mm wide), edges of blades can be smooth or finely toothed (need to look closely to see). Blade is tapered at the base where it connects to the stalk.
Stalk: (2-3mm)

Caulerpa racemosa
Frond: grape-like to disc-like (up to 5cm tall)
Branchlets: mushroom shaped to flattened discs (3-4mm in diameter), can have both types of branchlets on one individual or just one type

Caulerpa prolifera
Frond: flat, erect, elongate to oval in shape (6-15cm tall). Blade is tapered at the base where it connects to the stalk.
Stalk: (1-2cm tall)

Caulerpa racemosa var. lamourouxii
Frond: flat grape-like (10-15cm tall), smooth to bumpy margins bearing no branchlets to club shaped branchlets.
Central Axis: flattened
Branchlets: club shaped (2-7mm diameter)
Stalk: (2-3mm)

Caulerpa nummularia
Frond: disc-like
Branchlets: flattened, disc-like, margins sometimes scalloped (1-3mm in diameter)

Caulerpa cupressoides
Frond: 4 parallel columns of branchlets (up to 25cm tall)
Branchlets: cone shaped, pointed tip, curved upward (1-2mm long)

Caulerpa serrulata
Frond: flat, forked branching, can be twisted or spiraling (4-7cm tall, 2-4mm wide), margins have teeth that are wedge shape with a pointed tip (1mm long)

Caulerpa verticilata
Frond: finely branched and form fuzzy mats (1-3cm tall) fine branchlets are organized into circular whorls around the stalk

Caulerpa paspaloides
Frond: dense clusters of branchlets (7-25cm tall), seaweed resembles shape of a test tube brush or feather duster
Stalk: cylindrical, supports frond and does not have any branchlets
Disposal of Caulerpa:
Freeze Caulerpa for a minimum of 24 hours and then place in trash.

Questions? Need copies of key?
Contact:
Susan Frisch Zaleski
Sea Grant Program
University of Southern California
3616 Trousdale Pkwy, AHF 209
Los Angeles, CA 90089-0373
phone: (213) 740 - 8602
FAX: (213) 740 - 5936
email: szaleski@usc.edu

Dr. Linda Walters
Department of Biology
University of Central Florida
4000 Central Florida Blvd.
Orlando, FL 32816
phone: 407-823-2148
FAX: 407-823-5769
email: ljwalter@pegasus.cc.ucf.edu

Graphic Design: Suzie Dotan
Editors: Susan Zaleski, Phyllis Griffman

To Learn More:
http://www.usc.edu/org/seagrant/caulerpa/index.html

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Dr. Lynn Hodgson
Dr. Dianne Littler
Dr. Mark Littler
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Dr. Celia Smith
Dr. Jayson Smith
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References: