

Coldwater Aquascape

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According to Hans Frey (1), the coldwater aquarium is one which "needs no artificial heating and may be set up in an unheated room, summer and winter, as long as it is protected against frost. The coldwater aquarium is used to keep domestic animals and plants, as well as those of the temperate zone of other continents."

Coldwater aquaria usually have a relatively high degree of hardness and a neutral pH. Coldwater fishes and vegetation are adapted to these conditions, generally speaking. Petrified wood may be added to coldwater tanks to increase the hardness of the water.

Heated aquaria have a lower oxygen content than coldwater aquaria, because the ability of water to hold oxygen decreases with temperature. However, since coldwater fishes can require proportionately more oxygen, strong aeration is suggested, particularly in summer.

Fifteen to 18 hours of lighting is the norm during the reproductive period of the plants (spring and summer). Light should be decreased during the cooler months.

It must be remembered that a plant is a living thing: it eats, breathes, moves, grows, responds to a stimuli, reproduces. It can be aided or destroyed by the environment that the aquarist provides for it, just like a fish. I believe it has been forgotten by us that many plants we keep in tropical aquaria are native and temperate zone plants that should only be kept in cooler water--preferably under 68 F. Otherwise, they can become stringy and pale, or even dissolve. Simply, they would be healthier in coldwater tanks.

Using the information below, the coldwater aquarist can literally run wild picking out plants in local shops (or, for that matter, from native waters) for his tanks. This is by no means a complete list, but it will give you an idea of the selection open to you.

Elodea canadensis, frequently referred to as Anacharis, has dark green lanceolate leaves and is a fast grower. Tolerates temperatures as low as 50 F. May also be allowed to float free. Propagation by runners and cuttings.

Sagittaria caroliniana has light green, delicate fan-shaped leaves which grow from stems. Bright lighting, algae free conditions are best. Propagation through cuttings.

Hygrophila polysperma is a bunch plant, has bright green leaves. Very hardy. Reproduces by cuttings or runners.

Myriophyllum spp., fine leaved, make excellent spawn receptors. Need strong light. Reproduce by runners.

Salvinia auriculata (floating water fern) should be kept at temperatures under 65 F, 10-20 DHneutral pH.

Ceratophyllum demersum (hornwort) and C. submersum from Europe have thread-like leaves, make good spawning grass. Prefers calcium content of 10-30 DH, temperature under 65.

Acorus spp. have leaves resembling spokes. Requires good light, pH of 6.4-7.0, 10-25 DH, temperatures in the 60's. Can be propagated by splitting up the crowns.

Isoetes lacustris is grasslike and dark green, and does well in temperatures below 65 F in acid, clear and calcium-free water. Propagation is by runners.

Lobelia dortmanna prefers soft, clear water with low calcium content, temperature from 58-low 60's. Requires much light. Propagates by shoots.

Vallisneria spiralis is very hardy, but has a preference for alkaline pH and moderate hardness. Propagates by runners.

Lageronsiphon muscoides needs much light, has curled leaves around central stem. Temperature 50-77 F.

Lemna (best known of this genus is duckweed). Sensitive to warm water.

Lysimachia nummularia (Moneywort) is characterized by trailing stems and smooth leaves. Just provide it with sufficient light and cool temperatures. Very hardy.

Marsilea quadrifolia (four leaf clover) prefers 64-72 F, but can do well even at cooler temperatures. Reproduction is by division of the rootstock or by runners.

Riccia fluitans (crystalwort) is a floating plant which forms a thick layer on the water surface. Prefers sunny well-lit area at 59-77 F.

Bacopa spp. is a bunch plant. Prefers mid 60's; over 68, degeneration may occur. Needs soft water. Propagation is by seeds, although more practically carried out in aquaria by planted twigs.

Cardamine lurata. Prefers temperature of 59-68 F, good lighting and no snails. Semi-circular veined leaves growing singly off stems. Reproduction achieved by cutting the rootstock or planting twigs (which root quickly). Beautiful but delicate.

Littorella uniflora should be kept in water under 65 F with an acid pH.

Echinoderus ranunculoides is very sensitive to variations in light, temperature and water level.

Fontinalis spp. are bunch plants which thrive when temperatures are under 64 F. Good spawning substrate.

Pulnularia globulifera (pillwort) does best at 50-65 F and a DH of 10. Propagation is achieved through separation of the rootstock.

(1) Hans Frey, Illustrated Dictionary of Tropical Fish. TFH Publications, Hershey City, New Jersey, p. 223. This text used as reference for this article.