

AHAP MEMBERSHIP HANDBOOK

INTRODUCTION

PURPOSE

The purpose of the Aquatic Horticultural Award Program (AHAP) is to promote the keeping and propagation of aquatic plants, aid in the recognition of plant species, encourage research, through the growth and propagation of different species, recognize achievements of individuals through awards, and disseminate information through GPASI's Finformation and through the general meetings.

AQUATIC PLANT DEFINED

An aquatic plant is one that exists in a submerged or floating state as a normal occurrence at some time during the course of any one complete growing season. Freshwater algae are not eligible for inclusion in the program. Marine macro algae are eligible, but marine micro algae are not eligible.

RESOURCES FOR AQUATIC PLANT IDENTIFICATION

The main identification books which will be used for the AHAP program will be Baensch Aquarium Atlas volumes 1-3, Aquarium Plants by Kristel Kassermann and The Plants of Pennsylvania by Ann Fowler Rhoads & Timothy A. Block. Back up books will be Tropica Catalogue Aquarium Plants - A Complete Introduction by Holger Windelov published by T.F.H. and A Fishkeepers Guide to Aquarium Plants by Barry James published by Tetra Press. Other references will be used as necessary for the identification of species.

THE AHAP COMMITTEE

The AHAP Chair shall be appointed by the GPASI President, and the remaining members shall be appointed by the AHAP Chair.

Function of the AHAP Committee

To oversee and enforce all rules and regulations governing AHAP, awarding points to qualifying members, maintaining records and presenting awards. The AHAP rules and regulations shall be reviewed and revised when necessary.

AHAP Checkers

Any person on the AHAP committee may verify the species of a submitted plant and any flowerings or sexual propagation, with the AHAP chair having final approval. **If a mistake is made on the identification of an AHAP submission, the species or variety submitted will be changed to the proper class and point value.**

*** The AHAP Chair reserves the right to reject stunted, algae covered, or unhealthy plants. Plants that are heavily contaminated with Lemna sp., Utricularia gibba, Wolffia sp or any other "nuisance" plant may be rejected. Additionally, there may only be one species per bag. ***

Amendments

The AHAP committee may make changes to these rules as they deem necessary, subject to the approval of the GPASI Board of Directors. Changes will be published to GPASI members.

If there are changes to the requirements for completing a Class or achieving a Level of Accomplishment, the Class or Level awards already achieved by current participants will not be changed. If the points listed for a species are revised, any points previously awarded will not be changed.

ELIGIBILITY

All members in good standing are eligible for AHAP. If any members should not renew their membership, awarded points will be kept on an "inactive list" until such time that they renew their membership.

TRANSFER MEMBERSHIPS-NEW MEMBERS ONLY

Any person joining GPASI and transferring from another club will be allowed to transfer points from the other club only if that club's rules meet GPASI's AHAP criteria. These propagations must be verified by the transferring club. The points allocated will follow GPASI's AHAP. Certificates or awards will not be given for plants previously propagated or Classes already finished in another club. Full point credit for transferred propagations will be given toward a member's Level of Achievement.

RULES AND REQUIREMENTS FOR PROPAGATION

The propagation process must be completed in the manner described below.

1. Growth that is simply continued growth of obtained plants does not count! Material turned in for AHAP must be from side shoots, new stems after trimming, runners or seeds.

2. Regrowth of a seasonal plant does not count as a propagation; it is simply classified as a new growth (Examples are the Aponogeton spp.).
3. A sufficient quantity of propagated plants must be turned in to qualify.
 - a. For all floating species in Class A, about ½ cup (not including water) must be submitted.
 - b. For all moss species in Class K, about a ¼ cup (not including water) must be submitted.
 - c. For Class G, stem plants, the initial stem count shall be at least six stems, rooted or un-rooted, and must be doubled as determined by the count of growing stems. The propagated plants must have roots, if the species is normally rooted; a fresh cutting is not acceptable.
 - d. Reproducing by means of runners (stolons), rhizomes, adventitious roots or adventitious shoots, shall be recognized when the following amount of healthy plants are produced, which are capable of living independently from the parent plant. Four or more plants for Class C, three or more plants for Class D and two or more plants for Class E (except chain swords: they will require four or more plants). The parent plant must be alive and healthy.
 - e. For small creeping shoot species, from Class J, about ¼ cup (not including water) must be submitted. Large creeping shoot species from Class J require a plant with at least 12 leaves.
 - f. All quantities stated above are required in Class H and Class L when applicable.
4. All varieties and subspecies will be counted towards the total point value; however, only one variety or subspecies will count towards the completion of a class. All varieties of a species will be worth the same point value of the species unless otherwise stated.
5. If the species of a plant or macro-algae is not known, then the participant may not turn in the same genera without a species name more than once.
6. If a species is capable of being in multiple classes, then the participant will indicate which class will be credited via the AHAP report form.
7. For a species to be recognized for propagation, the participant must submit a completed AHAP form along with one or all of the following:
 - a. Plant or plants donated to the AHAP auction. Even if a plant is not donated to the AHAP auction, the propagation must still be visually verified by a member of the AHAP committee.

- a.i. If a plant is not submitted for auction a cash donation (currently: \$3.00) will be required to help defer the cost of certificates and awards. Amount to be set by the AHAP committee.
 - b. A written article on the propagation of the species, submitted for publication in the GPASI Finformation. **The article will be worth 1.5 times the point value for the asexual propagation of the plant.** Proof of propagation will still be required by means of an AHAP committee visual inspection or a clear picture of the plant propagated.
 - c. A five to ten minute oral presentation on the propagation of the species.
 - c.i. At least one month's prior notification to the AHAP Chair is required before an oral presentation can be scheduled.
 - c.ii. Photos or slides as part of the oral presentation would be helpful to other members and are encouraged, but are not required.
 - d. Completion of all 3 options (a, b and c) for a species will result in additional points being awarded to the participant equal to the value of the propagation. This means an extra 40 points for a target species.
8. Flowering, after proper verification **and a completed AHAP submission form**, shall be awarded points equal to the amount of the asexual propagation of the particular species. However, in view of the fact that the difficulty of propagating a plant is not always the same as the difficulty of getting it to flower, the exceptions listed below will be awarded ½ the total point value of the asexual propagation of the particular species.
- a. The exceptions are: All Aponogeton species, all Blyxa species, **all Bucephalandra species**, Eichhornia crassipes, all Iris species, Sagittaria latifolia.
9. Sexual reproduction will be recognized for one or more plants reproducing by sexual means from the aquarist's own stock. Sexual propagations will be awarded 1.5 times the value of asexual propagation. **Sexual propagation will be worth .5 times the amount of the vegetative propagation, if the species sexually propagated has already been submitted as an asexual propagation.** Seeds and reproduced plants must be from the member's parent plant(s) and not obtained from a supplier or nursery. The reproduction of those plants propagating from spores (i.e., ferns and mosses) will be considered a sexual reproduction and shall be awarded 1.5 times the point value of the asexual propagation of the particular plant species. In order to get credit for a sexual propagation, some type of proof (e.g. pictures) will be required.

AWARDS

1. Plant Certificates will be awarded for each species successfully propagated.
 2. Certificates will be given for the completion of each AHAP Class.
 3. A Certificate will be given for the fulfillment of the requirements for the Level of Accomplishments of Beginning Horticulturalist and Aquatic Horticulturalist.
 4. Plaques or trophies will be given for the fulfillment of the requirements for each Level of Accomplishment of above Aquatic Horticulturalist.
 5. A Special award will be given for the completion of all classes.
 6. To encourage AHAP participants to propagate very difficult or rare plants, the AHAP Committee will award a special certificate for the propagation of any species from the Target List. The certificate will be awarded following submission of a completed AHAP report, **and either** a donation of the propagated plant for AHAP auction, **or** submission of an article about the plant and its propagation written for GPASI publication.
 7. A lifetime GPASI membership will be awarded to anyone becoming a Grand Master Aquatic Horticulturalist. To maintain this title, the member must give a plant related oral presentation or write a plant related article at least once each calendar year. The member must also serve on the AHAP Committee.
 8. Other special awards may be given at the discretion of the AHAP Committee.
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LEVELS OF ACCOMPLISHMENT

Requirements for the levels of accomplishment are as follows:

Novice Aquatic Horticulturalist: a total of 5 points.

Beginning Aquatic Horticulturalist: a total of 100 points plus the following:

- One completed class.

Aquatic Horticulturalist: a total of 200 points plus the following:

- Two completed classes.
- One flowering or sexual reproduction.

Senior Aquatic Horticulturalist: a total of 400 points plus the following:

- Three completed classes.
- Four flowerings.
- One sexual reproduction.
- Two articles, oral presentations, or artworks published in the newsletter.
- One Target species propagated.

Expert Aquatic Horticulturist: a total of 1,000 points plus the following:

- Five completed classes.
- Ten flowerings.
- Two sexual reproductions.
- Five articles, oral presentations, or artworks published in the newsletter.
- Three Target species propagated.

Master Aquatic Horticulturist: a total of 1,800 points plus the following:

- Eight completed classes.
- Twenty flowerings.
- Four sexual reproductions.
- Eight articles, oral presentations, or artworks published in the newsletter.
- Five Target species propagated.

Grand Master Aquatic Horticulturist: a total of 2,500 points plus the following:

- Completion of all classes.
 - Twenty-five flowerings.
 - Eight sexual reproductions.
 - Ten articles, oral presentations, or artworks published in the newsletter.
 - Ten Target species propagated.
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CLASSES

- There are 12 classes A-L.
- Classes A-H, J and K are determined by biological types, which are artificial keys to groups of aquatic plants. They include a combination of factors which include mode of reproduction, structure and scientific classification.
- Class "I" includes all marine plants. Marine plants include many kinds of macroalgae and a variety of grasses.
- Class L contains plants native to Pennsylvania and do not include introduced species
- All species in Classes A-G and I-K must be in submersed form.
- If a species is eligible for more than one class, the propagator must select which class will be credited via the AHAP report form.

Point value assignment

Plants are separated into point categories according to the following criteria: how difficult a plant is to grow and propagate according to the AHAP committee, the reputed difficulty of a plant according to other aquatic gardeners and aquarium literature, and how long propagation takes. Plants are assigned values of 5, 10, 15, or 20 points, with Targets being valued at 40 points. **Any decimals will be rounded up to the nearest whole number.** After the completion of a class the propagator continues to receive certificates and points for additional propagations in that class, but no further certificates will be awarded for that class.

CLASS LISTINGS

The number of species required to complete a class are listed in parenthesis after the class description.

Class A—Most Small Surface & Near Surface Type Plants (6 species)

Small plants floating on the surface of the water. They typically have some parts reduced (roots, stems, or leaves) and for nourishment they are dependent on dissolved matter in the water. They are free floating and do not root to any substrate.

5 points: Riccia fluitans, Azolla caroliniana, all species **and varieties** not mentioned in other point categories.

10 points: Limnobium laevigatum, Limnobium spongia, Limnobium stoloniferum.

15 points: Salvinia auriculata, Salvinia molesta.

20 points: Salvinia cucullata.

Targets: None.

Class B—Most Large Surface & Free Floating Type Plants (6 species)

Larger floating plants. Some have floating leaves exposed to the air and others like Ceratophyllum stay submerged but do not form true roots.

5 points: All Ceratophyllum species, all Ceratopteris species, Eichhornia crassipes, Utricularia gibba.

10 points: Ludwigia helminthorrhiza, Ludwigia sediodes, Pistia stratiotes, all species **and varieties** not mentioned in other point categories.

15 points: All Eichhornia species (except E. crassipes).

20 points: All free floating Utricularia species (except U. gibba).

Targets: Aldrovanda vesiculosa.

Class C—All Sagittaria & Vallisneria Type Plants (6 species)

These are submersed plants with long leaves which are thread-shaped or ribbon-shaped, creating a rosette. They root on the bottom and flower on the surface of the water with the exception of male Vallisneria flowers.

5 points: All Vallisneria species.

10 points: Eleocharis acicularis, Eleocharis parvula, Eleocharis vivipara, **All Sagittaria species and varieties**, all species **and varieties** not mentioned in other point categories.

15 points: Blyxa japonica, Subularia aquatica.

20 points: All Blyxa species (except B. japonica)

Targets: Cyperus helferi

Class D–All Anubias, Aponogeton & Cryptocoryne Type Plants (6 species)

Rosette plants with their leaves submersed and with distinct petioles.

5 points: None

10 points: all Cryptocoryne beckettii varieties, all Cryptocoryne crispata varieties, all Cryptocoryne walkeri varieties, all Cryptocoryne wendtii varieties, all species **and varieties** not mentioned in other point categories.

15 points: All Anubias species, Aponogeton ulvaceus, Aponogeton undulatus, all Cryptocoryne species not mentioned in other point categories.

20 points: All Aponogeton species not mentioned in other point categories (except A. didistachyus in Class F), **Bucephalandra sp. ‘Copper Leaf’**, **Bucephalandra sp. ‘Theia Blue’**, Cryptocoryne elliptica, Cryptocoryne griffithii, Cryptocoryne jacobsenii, Cryptocoryne lingua, Cryptocoryne nevillei, Cryptocoryne scurrielis, Cryptocoryne villosa, all Lagenandra species.

Targets: Aponogeton bernierianum, Aponogeton madagascariensis, all Bucephalandra species **except Bucephalandra sp. ‘Copper Leaf’ and Bucephalandra sp. ‘Theia Blue’**, Cryptocoryne auriculata, Cryptocoryne bogneri, Cryptocoryne bullosa, Cryptocoryne nurii, Cryptocoryne schulzei, Cryptocoryne thwaitesii, Cryptocoryne uenoi, Cryptocoryne versteegii, all Eriocaulon species, Ottelia alismoides, Ottelia ulvifolia.

Class E–All Sword and Crinum Plants (5 species)

Rosette and bulb type plants.

5 points: None.

10 points: Helanthium tenellum and all species **and varieties** not mentioned in other point categories.

15 points: Crinum aquatica, Crinum natans, Crinum thaianum and all Echinodorus species not mentioned in other point categories.

20 points: Echinodorus portoalegrensis, Samolus parviflorus.

Targets: Echinodorus subalatus.

Class F–Water Lily Type Plants (3 species)

Plants which root in the mud with the roots growing from a stout rootstock. The leaves have long petioles (stems) and they float on the surface of the water. The flowers are on the surface of the water, and the fruits sink after ripening.

5 points: Aponogeton distachyus.

10 points: All species **and varieties** not mentioned in other point categories.

15 points: Barclaya longifolia, all Nuphar species, all Nymphaea species, Nymphoides aquatica.

20 points: All Orontium species.

Targets: All Brasenia species.

Class G–Stem Plants (10 species)

Plants with long stems with leaves which root in the mud. They are dependent on life in the water, but at the same time can have contact with the air (floating leaves, immersed part of the stem and the blossoms). The roots must remain moist, but the stems can grow in or out of the water. Many aquarium species belong to this group.

5 points: **Egeria densa**, All Elodea species, Hygrophila polysperma, Rotala rotundifolia.

10 points: All species **and varieties** not mentioned in other point categories.

15 points: Acemella repens, Bacopa sp. ‘Colorata’, Cabomba aquatica, Cabomba caroliniana, Callitriche terrestris, Hyptis lorentziana, Hygrophila balsamica, Hygrophila pinnatifida, Juncus repens, all Lindernia species except Lindernia rotundifolia (all varieties), Ludwigia arcuata, Ludwigia glandulosa, all Myriophyllum species, Penthorum sedoides, Pogostemon erectus, Pogostemon yatabeanus, **all Proserpinaca species**, Rotala sp. ‘butterfly’, Rotala sp. ‘Colorata’, Rotala pusilla, Rotala sp. ‘Nanjenshan’, all Staurogyne species except Staurogyne sp. ‘Purple’.

20 points: All Ammania species (except A. latifolia and A. sp. ‘Red’), Cabomba furcata, Diodia cf. kuntzei, Eichhornia diversifolia, Eichhornia azurea, Gratiola viscidula, Hottonia palustris, Limnophila sp. ‘Guinea broad leaf’, **all Ludwigia inclinata varieties except Ludwigia inclinata, Ludwigia “Rubin”**, Murdannia keisak, Murdannia sp. red, Poaceae sp. ‘Purple Bamboo’, Rotala ramosior, Rotala sp. ‘Goias’, Rotala romosior ‘Sunset’, Rotala sp. ‘Vietnam’, Sphaerocaryum malaccense, Staurogyne sp. ‘Purple’.

Targets: Aciotis acuminifolia, Ammania latifolia, Cuphea anagalloidea, Egeria fluctuans, Hemianthus callitrichoides, Hydrothrix gardneri, Hygrophila lancea, Hygrophila sp. ‘red’, **Ludwigia inclinata**, Ludwigia senegalensis, Ludwigia sphaerocarpa, Pogostemon helferi, Pogostemon stellatus, Rotala indica, **Rotala romosior ‘Florida’**, Rotala wallichii, Rotala macrandra, Ammania sp ‘red’, all Tonina species, all Syngonanthus species.

Class H–Most Bog Type Plants (8 species)

Shore plants living only in the partly emerged and terrestrial phases and bog plants. They typically have a short submerged stage. Normally grows with the water level below the

surface, but the roots must reach the water level. The leaves are normally out of the water, but can tolerate being submerged for prolonged periods of time.

5 points: All Iris species, Sparganium species.

10 points: All species **and varieties** not mentioned in other point categories.

15 points: Limncharis flava.

20 points: Darlingtonia californica.

Targets: Regnellidium diphyllum.

Class I—All Marine Plants (4 Green, 1 Red, 1 Brown, 1 vascular)

Marine Macroalga (Green, Red & Brown) and Grasses. Macroalga are large enough to be easily seen and examined. Microalga, which are not eligible include the many microscopic, mostly single-celled forms. The vascular marine plants are mostly flowering grasses. Some of these grasses can also tolerate brackish water, but all are included here.

Red Macro Algae (Rhodophyta)

5 points: Botryocladia species.

10 points: Galaxaura marginata.

15 points: Galaxaura oblongata.

20 points: All species **and varieties** of red macroalga not mentioned in other point categories.

Targets: Acanthophora spicifera, Anotrichum barbatum, Asparagopsis taxiformis, Callithamnion cordatum, all Chondria species, all Dasys species, Dictyurus accidentalis, Griffithsia globulifera, all Jania species, Martensia pavonia, Trichogloopsis pedicellata.

Green Macro Algae

5 points: All Caulerpa not mentioned in other point categories, Boergesenia forbesi, Chaetomorpha linum, Enteromorpha flexuosa, all Valonia species, and Ventricaria ventricosa.

10 points: All Bryopsis species, Caulerpa crassifolia, Caulerpa lanuginosa, Caulerpa serrulata, Caulerpa taxifolia, all Chaetomorpha species, Cladophora prolifera, all Chaetomorpha species not mentioned in other point categories, Codium decorticatum.

15 points: Batophora oerstedii, Caulerpa cupressoides, Caulerpa verticillata, all Chaetomorpha species, all Cladocephalus species, Codium repens, Dasycladus vermicularis, Dictyosphaeria cavernosa, Neomeris annulata, all Penicillus species, all Rhipileia species, and all Ulva species.

20 points: All species **and varieties** of green macroalga not mentioned in other point categories.

Targets: All Chamaedons species, Cymopolia barbata, Halimeda lacrimosa, Halimeda opuntia, Ulvarua oxysperma.

Brown Macro Algae

5 points: None.

10 points: None.

15 points: None.

20 points: All species **and varieties** of brown macroalga not mentioned in other point categories.

Targets: Dictyota bartayresii, Dictyota divaricata, Dictyota linearis, Lobophora variegata, Rosenvingea intricata, and all Turbinaria species.

Marine Vascular plants

5 points: None.

10 points: Thalassia testudinim, all species **and varieties** of marine plants and vascular plants not mentioned in other point categories.

15 points: Halophila englemannii.

20 points: Halophila decipiens.

Targets: None.

Class J—Creeping Shoot Plants (5 species)

This class includes low growing plants that spread by a creeping shoot bearing a new leaf or leaves at a regular interval.

5 points: Marsilea mutica, Marsilea quadrifolia.

10 points: Hydrocotyle leucocephala, Hydrocotyle verticillata, Hydrocotyle vulgaris, Lilaepsis brasiliensis, Lilaepsis mauritiana, Lilaepsis novae-zealandiae, all Marsilea species not mentioned in other point categories, Ranunculus limosella, and all species **and varieties** not mentioned in other point categories.

15 points: Elatine hydropiper, Elatine triandra, Glossostigma diandra, Glossostigma elatinoides, Hemianthus callitrichoides, Ranunculus inundates.

20 points: Hydrocotyle sibthorpiodes, Rotala mexicana 'Goias', Utricularia tricolor.

Targets: All Pilularia species, Myriophyllum tenellum.

Class K—Aquatic Ferns and Mosses (6 species)

This class contains all aquatic ferns and mosses not listed in other categories. All species herein grow under water as a normal circumstance.

5 points: All Ceratopteris species, Marsilea mutica, Marsilea quadrifolia, all Microsorium species (except M. pteropus var. 'Philippine'), Taxiphyllum barbieri.

10 points: *Bolbitis heudelotii*, All *Marsilea* species not mentioned in other point categories, all *Taxiphyllum* species (except *T. barbieri*), all *Vesicularia* species, all species and varieties not mentioned in other point categories.

15 points: *Amblystegium serpens*, *Fontinalis antipyretica*, *Heteroscyphus zollingeri*, *Hydropogonella gymnostoma*, *Leptodictyum riparium*.

20 points: *Bolbitis heteroclita*, *Fissidens fontanus*, *Hymenophyllaceae* sp. 'Wayanad', *Loxogramme* sp. 'wave moss', *Microsorium pteropus* var. 'Philippine', all *Riccardia* species.

Targets: *Callicostella prabiaktana*, *Didymoglossum erosum*, all *Fissidens* species except *Fissidens fontanus*, all *Pilularia* species, all *Isoetes* species.

Class L–Native Plants (7 species)

Any freshwater or brackish species that are endemic to Pennsylvania. It cannot be an introduced species, non-native variety, or have a non-native location connotation.

5 points: All native *Elodea* species, all native *Iris* species, all native *Lemna* species, all native *Spirodela* species, *Utricularia gibba*, *Vallisneria americana*, all native *Wolffia* species.

10 points: All native *Eleocharis* species, *Lobelia cardinalis*, *Ludwigia palustris*, all native *Najas* species, all native *Persicaria* species, all native *Potamogeton* species, all native *Sagittaria* species, *Zosterella dubia*, all native species not mentioned in other point categories.

15 points: All native *Hydrocotyle* species, *Lindernia dubia*, all native *Myriophyllum* species not mentioned, all native *Nuphar* species, all native *Nymphoides* species, all native *Proserpinaca* species.

20 points: *Penthorum sedoides*, *Rotala ramosior*, *Ranunculus aquatilis*, *Ranunculus flabellaris*, all native *Utricularia* species (except *U. gibba*).

Targets: *Brasenia schreberi*, all native *Eriocaulon* species, all native *Isoetes* species, *Myriophyllum tenellum*.