**Actaea rubra** (Aiton) Willd.

**Current Status**  
watch list

**Proposed Status (click for definitions)**  
PT

**Proposed by:** Jessica McPherson  
PNHP / Western PA Conservancy

**Habitat**  
mesic to dry-mesic forests; often in at least slightly rich soils.

**Estimated number of extant occurrences**  
(5) 10 – 30 (45)

**Estimated number of extant individuals**  
(100 – 600) Genets

**Factors that increase conservation concern**
This species appears to prefer richer, higher-pH soils, and it also has a northern distribution; such habitats are scarce in the northern portions of the state.

This species appears to have never been common. The middle of Pennsylvania is the very southern extent of its range. There are few recent sightings or collections of the plant, possibly indicating a decline.

VPTC fall 1996: "In addition to the March observations (Jim Bissel and Ann Rhoads have seen only a few), John Kunsman hasn't seen this species in Pocono inventories and could only think of two sites where he has seen it. He has not looked at historic sites, however. Sue Thompson reported that Carnegie has quite a few specimen from 1992 and thereabouts, collected by amateurs in northern counties. We recommended Watch List status with the note that red baneberry is easy to recognize and the number of sites limited, so fieldwork should be straightforward."
Adiantum aleuticum (Rupr.) Paris

Current Status    TU
Proposed Status (click for definitions)    N

Proposed by:  Christopher Hoess
Delaware Technical Community College

Habitat  Variety of open rocky and shaded, rich forest habitats in west; serpentine openings and woodlands in east.

Estimated number of extant occurrences    (0) 0 – 0 (0)
Estimated number of extant individuals    () – () Genets

Factors that increase conservation concern
Limited serpentine habitat.

Primary populations are west of Rocky Mountains.

Factors that decrease conservation concern
Can colonize disturbed serpentine talus.
Similar to Adiantum pedatum.

"Upright habit" previously used to diagnose var. aleuticum/serpentine form of A. pedatum is not reliable (see Paris, 1991);
all sampled individuals are genetically A. pedatum, not A. aleuticum,
including those growing on serpentine talus.
Map showing location of the 13 samples in this study (dark green: ultramafic rock; blue, Susquehanna River)

Samples taken at Goat Hill Barrens (8), Nottingham County Park (1) (remaining 4 samples in Maryland, from Goat Hill, Pilot, and Bald Hill near Broad Creek)
Arctostaphylos uva-ursi (L.) Spreng.

Current Status  PX
Proposed Status (click for definitions)  PE
Proposed by:  David Tompkins, Jamie Morgan
Kleinfelder East, Inc.

Habitat  rocky ledge on a south facing forested slope

Estimated number of extant occurrences  (1) 1 – 10 (1)
Estimated number of extant individuals  (1) 1 – 1 (1) Ramets

Factors that increase conservation concern
One ramet was observed, about 3 feet by 3 feet.
This is currently the only known population in PA....

It is not known if the client notified the landowner of this occurrence. Due to the location on a rocky slope in a wooded area, there is no immediate threat.

Factors that decrease conservation concern
Rocky ledges are not highly susceptible to development.

Only ramets are reported, individual genets were not
Only extant population occurred on rocky ledge that was not
Due the vast amount of rocky bluffs that occur on private
It is likely that the amount of bearberry is underestimated,
**Asclepias verticillata L.**

Current Status

Proposed Status (click for definitions)  
PT/PR

**Proposed by:** Jessica McPherson  
PNHP / Western PA Conservancy

**Habitat**  
Xeric limestone prairies; serpentine barrens; calcareous slopes; shale barrens? Other sources say barrens (Weakley, NY flora atlas, Mich Flora), but in PA most locations appear to be associated with limestone, diabase, or serpentine.

**Estimated number of extant occurrences**  
(22) 25 – 33 (44)

**Estimated number of extant individuals**  
() 220 – 2200 () Genets

**Factors that increase conservation concern**  

- Low number of plants typically found at sites.  
- Xeric limestone prairies & serpentine barrens are vulnerable to succession under current fire suppression practices.

Species is listed as rare in all surrounding states except Ohio.

A large part of the species' range in PA is eastern PA limestone, diabase, and serpentine habitats; these have all suffered a high rate of conversion to other land uses over the past century. The other portion of the range is Ridge and Valley limestone barrens sites; these have been converted at a lower rate, but are few in number. There is a lack of recent collections (5 of 74 in PA flora project database).

Grassland/barrens on limestone, serpentine, and diabase are vulnerable to succession under current fire-suppression practices. Many XLP sites have been reduced greatly in area over the past 100 years via succession, and without intervention this trend will continue.

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**Factors that decrease conservation concern**  

- Small population sizes at many known sites.

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Additional factors not logically included on other worksheets:  

- Additional factors not logically included on other worksheets
**Aureolaria flava** (L.) Farw.

**Current Status**
- watch list

**Proposed Status (click for definitions)**
- PT/PR

**Proposed by:** Jessica McPherson
- PNHP / Western PA Conservancy

**Habitat**
- dry oak woodlands and forests, often on limestone (also diabase?).
- Hemiparasitic on oaks.

**Estimated number of extant occurrences**
- (10) 25 – 41 (60)

**Estimated number of extant individuals**
- () 625 – 2050 () Genets

**Factors that increase conservation concern**
- Browsed individuals are often observed; habitat is usually small-patch.

The species occurs primarily in limestone habitats; over 80% of limestone land area has been lost statewide. This species’ range is primarily in the ridge and valley and piedmont, areas that have experienced especially high rates of habitat conversion. Limestone habitats remain vulnerable to loss from habitat conversion and invasive species. There is a notable lack of recent collections: 6 of 106 PA flora project collections from post-1980. CM collections: 53 total, 20 since 1950, 4 since 1975, 1 since 1980.

**Factors that decrease conservation concern**
- Small population sizes at many known sites.
**Brickellia eupatorioides** (L.) Shinners

**Current Status**

**Proposed Status (click for definitions)**  
PT

**Proposed by:** Jessica McPherson  
PNHP / Western PA Conservancy

**Habitat**  
Xeric limestone prairies; dry calcareous slopes; shale barrens; a few diabase sites.

**Estimated number of extant occurrences** (12) 22 – 33 (45)  
**Estimated number of extant individuals** () 220 – 2200 () Genets

**Factors that increase conservation concern**

Low number of plants typically found at sites. Xeric limestone prairies & diabase meadows are vulnerable to succession under current fire suppression practices.  
Pennsylvania contains the northern edge of the species’ range (in Eastern U.S.)

This species is found in calcareous habitats, which have been lost to land use conversion at a high rate statewide, and especially in the Great Valley and Piedmont regions where almost half the historic known sites are located (80-95% habitat conversion of limestone areas in these regions). The species appears to require early-successional conditions, which have been altered by succession over the last century at limestone grasslands and barrens, under current fire-suppression practices. Review of historical aerial photographs at several XLP sites shows greatly decreased extent of grassland areas. Limestone grasslands and barrens remain vulnerable to habitat conversion, succession, and invasive species; without protection and active management, more populations of this species are likely to be lost.

**Factors that decrease conservation concern**

Additional factors not logically included on other worksheets
Carex hitchcockiana Dewey

Current Status: watch list
Proposed Status (click for definitions): PT
Proposed by: Jessica McPherson
PNHP / Western PA Conservancy

**Habitat:** Moist, rocky, limestone woods and slopes

**Estimated number of extant occurrences:** (14) 20 – 30 (45)
**Estimated number of extant individuals:** () 500 – 3000 () Genets

**Factors that increase conservation concern**

Mesic limestone forests are typically small remnants; they are especially vulnerable to invasive species.

This species appears to be uncommon throughout much of its range. (FNA - "Infrequent and local") It is tracked in most adjacent states. Carex hitchcockiana appears to have never been common in PA. It is a species of limestone and diabase habitats, and throughout the state these habitats have been lost at a disproportionate rate to land use conversion; remaining areas are small and fragmented. About half known collections are from the southeastern portion of the state, where ~90% of habitat has been lost to land use conversion. Without protection efforts, more habitat will likely be lost to land use conversion and invasive species.

**Factors that decrease conservation concern**

Additional factors not logically included on other worksheets

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[Map showing the distribution of Carex hitchcockiana across the state of Pennsylvania.]
**Chaerophyllum procumbens** (L.) Crantz
var. shortii Torr. & A. Gray

Current Status  
N

Proposed Status (click for definitions)  
PE (TU)

Proposed by:  
Steve Grund, Jessica McPherson, and Allison Cusick

Habitat  
Rich, mesic upland forests; rich floodplain forests and clearings (Weakley et al, Fl. VA). Calciphile (Naczi, pers comm).

Estimated number of extant occurrences  
(1) 2 – 5 (20)

Estimated number of extant individuals  
(50) 80 – 200 (10,000) Genets

Apex of fruit, even when immature, narrowed abruptly near the top, forming a concave outline near the apex; ovaries and fruit glabrous ----- var. procumbens

Apex of fruit narrowed gradually to the apex, convex throughout; ovaries and fruit usually but not always at least sparsely pubescent ---------- var. shortii

Specimens of C. procumbens have been examined for this variety at PH (Naczi), CM (Cusick, Grund, Naczi in part), CLM (Grund), and WVA (Cusick).

Factors that increase conservation concern  
Garlic mustard is problematic in these habitats.

Habitat conversion has taken a disproportionate amount of the habitats of this species.

Loss of floodplain and limestone habitat have been severe in Pennsylvania.

Factors that decrease conservation concern  
Seedbanker, but not over long periods (Baskin et al 2004)

Fruit can be glabrous, leading to misidentification as var. procumbens.
**Clematis occidentalis L.**

**Current Status**
watch list

**Proposed Status (click for definitions)**
S2 or S3

**Proposed by:** Jessica McPherson

**Habitat**
Rocky slopes and cliffs, calcareous. Only flowers in higher light situations.

**Estimated number of extant occurrences**
(6) 12 – 45 (65)

**Estimated number of extant individuals**
(6) 20 – 2500 (65) Genets

**Factors that increase conservation concern**

Sensitive to deer browse; only flowers in higher light situations; requires rocky calcareous slopes, typically a small-patch habitat.

This species seems to occur in small scattered populations throughout its range, and is tracked in most surrounding states. Capacity for long-distance dispersal to new sites unknown.

Over 80% of limestone areas have been converted to other landuses; 17% remains in natural cover. Rate of conversion may be lower in habitat because it is steep, but still likely a great decrease. Species has been observed very rarely in the last three decades, with 6 known occurrences and 4-8 specimens (CM+MA) since 1980; reasons for rarity of field observations despite surveys at many potential habitat sites not known, although possibly deer browse and succession.

This plant is fairly distinct, of medium size, and easy to recognize vegetatively.

POSCIP history - 1994: proposal to add to POSCIP with PBS status of U (Holt), but group decided that it is too common for POSCIP.

**Factors that decrease conservation concern**

Collections may be reduced because many individuals growing in shade do not flower.

Additional information:
Maine NHP - "Typically occurs in small populations that can be subject to random fluctuations or localized disturbance events. Known populations are all either at forest edges "or in the open, indicating that the plant does not do well under heavy forest cover."
**Cypripedium parviflorum var. parviflorum**

Current Status: PE

Proposed Status: UEHT

### Cypripedium parviflorum var. makasin

Current Status: N

Proposed Status: PE

**Proposed by:** Steve Grund PNHP/WPC

**Habitat:** Mesic to dry deciduous and deciduous-hemlock forests, usually on slopes (FNA)

Var. parviflorum, is the upland yellow lady's slipper. If considered to be distinct, var. pubescens has larger flowers than the other two varieties. The name "var. parviflorum" was long misapplied to the small-flowered taxon of wetland habitats, and we have been tracking it under that misaprehension. This taxon should be called var. makasin. It is not at all clear how common var. parviflorum actually is in Pennsylvania. We might not even have it at all, but it is also possible that many specimens labeled var. pubescens are actually this one. Maybe var. pubescens isn't even a good taxon. In which case we have var. parviflorum, with upper bracts pubescent beneath and usually in wetlands, flowers of various sizes, and var. makasin, always in wetlands, always small flowers, and bracts glabrous or nearly so beneath. There are also differences in pigmentation and flower scent.

The southeastern var. parviflorum differs from var. pubescens primarily in flower size and color, and the two might be merely forms. Most works dealing with Cypripedium parviflorum have treated the primarily boreal var. makasin as var. parviflorum, either including all small-lipped plants within var. parviflorum, or in some cases restricting the name to the northern variety and excluding the southeastern plants described by Salisbury as C. parviflorum. Fernald’s original publication on C. calceolus var. parviflorum actually treated var. makasin, citing a description of that variety and clearly discussing the northern plant. Additionally, although geographically accommodating Salisbury’s plant, Fernald excluded most of the range of the southeastern var. parviflorum, thereby referring most plants of var. parviflorum to var. pubescens, and further restricted var. pubescens to the east, thereby assigning most plants of that variety to his northern var. parviflorum, i.e., var. makasin. Consequently, most published illustrations of var. parviflorum are in fact var. makasin. Variety parviflorum has been dealt with primarily in publications on the southeastern flora. In the east, var. makasin is quite distinct, but in the west it becomes difficult to separate from very small plants of var. pubescens that are common there; in that area, fragrance is often the least equivocal character. Charles Sheviak in FNA.
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Varietal Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Abaxial surface of distalmost sheathing bract (and often next) sparsely and inconspicuously pubescent to glabrous when young; flowers small; lip 15–29 mm; sepals and petals usually suffused with dark reddish brown or madder, or in the west often spotted and blotched; scent intense, sweet.</td>
<td>11c var. makasin</td>
</tr>
<tr>
<td>+</td>
<td>Abaxial surface of distalmost sheathing bract (and often next) densely and conspicuously silvery-pubescent when young (later sometimes glabrescent); flowers large to small, lip 20–54 mm; sepals and petals variably spotted, striped, blotched, and reticulately marked with reddish brown or madder (rarely unmarked); scent moderate to faint, rose or musty.</td>
<td>(2)</td>
</tr>
<tr>
<td>2</td>
<td>Flowers small, lip 22–34 mm; sepals and petals densely and minutely spotted with dark reddish brown or madder and appearing uniformly dark (rarely coarsely spotted and blotched); s New England to Kansas and southward.</td>
<td>11a var. parviflorum</td>
</tr>
<tr>
<td>+</td>
<td>Flowers commonly large, lip to 54 mm, but very small in some boreal and northern cordilleran specimens (as small as 20 mm); sepals unmarked to commonly spotted, striped, and reticulately marked with reddish brown or madder, rarely extensively blotched.</td>
<td>11b var. pubescens</td>
</tr>
</tbody>
</table>
**Dichanthelium leibergii** (Vasey) Freckmann

**Current Status**
SH

**Proposed Status (click for definitions)**
S1

**Proposed by:** Jessica McPherson

**Habitat**
"Dry to wet (primarily mesic) prairie remnants" - Michigan flora. Dry prairie (chicago region), open woodlands.

**Estimated number of extant occurrences**
() 1 – 5 ()

**Estimated number of extant individuals**
() 50 – 250 () Genets

**Factors that increase conservation concern**

This species had been presumed extirpated, with only one historic location, and was rediscovered in 2011 by Harry Henderson on the "mesic prairie" portion of the Big Hollow limestone grasslands in Centre County, PA. Henderson showed the specimen to Carl Keener & sent it to Robert W. Freckman (University of Wisconsin Freckman Herbarium), who confirmed the ID. It is not likely there are many populations that have been overlooked. Limestone grasslands are few in number and limited in extent in PA and have been fairly well surveyed.
**Diplazium pycnocarpon** (Spreng.) Broun

**Current Status**  
watch list

**Proposed Status** (click for definitions)  
PR

**Proposed by:** Jessica McPherson

**Habitat**  
Cool forested ravines and low areas around caves; calcareous. Also on diabase.

**Estimated number of extant occurrences** \( (32) \) 42 – 65 \( (80) \)

**Estimated number of extant individuals** \( () \) 810 – 2490 \( () \) Genets

**Factors that increase conservation concern**

This species appears to require fairly intact habitats; limestone areas are also particularly vulnerable to invasive species.

This species is tracked or S4 in about half its total U.S. range.

The species is a calciphile, and while there are a fair number of historic collections, over 80% of limestone areas in the state have been converted from natural cover. Factoring in a conservative estimate of the number of populations lost (based on land conversion rates in the physiographic sections the plant occurs in), the estimated extant populations meet criteria for PR. The species does have a substantial portion of its known extant occurrences in the SW, and historic occurrences in the northern tier. While it is inherently limited in these regions because high-pH soils are very limited in extent, these regions have been converted at lower rates than other calcareous regions. The SW and northern tier regions are currently experiencing expanded development for gas extraction, and it is likely habitat in these areas will be impacted if adequate review and protection are not in place.

This species is easy to recognize and hard to miss, less likely than many to be undercollected. Small numbers of plants (10-30) are observed at most known sites.

**Factors that decrease conservation concern**

Additional factors not logically included on other worksheets
**Galium boreale** L.

**Current Status**

**Proposed Status (click for definitions)** PT/PR

**Proposed by:** Jessica McPherson
PNHP / Western PA Conservancy

**Habitat**
Dry woods, forests, grasslands; on limestone or diabase. Flora of Virginia - limestone or dolomite; NY, Michigan do not specify.

**Estimated number of extant occurrences** (10) – (30)

**Estimated number of extant individuals** (500) – (6000) Genets

**Factors that increase conservation concern**

Typically small-patch habitats; may be affected by succession, as it is commonly observed in thin woods, woodlands. Limestone habitats are particularly vulnerable to invasive species.

Pennsylvania is near the southern extent of the range (in Eastern U.S.); only extends further south in mountains of WVA & VA; tracked in both states.

There is a scarcity of recent collections. Although there are historic collections from the northern tier, there are no recent collections from this region. There are very few known extant locations. This may reflect combined impacts of habitat loss in limestone areas, and succession reducing available habitat.

**Factors that decrease conservation concern**

Additional factors not logically included on other worksheets

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Photo: Hugh McDonald
Houstonia canadensis Willd. ex Roemer & Schultes

Current Status  \( N \)
Proposed Status  \( PE \)

Proposed by: Steve Grund, WPC/PNHP

Habitat
Deciduous forests, openings, cliffs, banks, roadsides, often in rocky soil over limestone or shale (E.E. Terrell. 1996. Revision of Houstonia. Systematic Botany Monographs 48)

Estimated number of extant occurrences (1) 3 – 15 (30)
The record from Luzern County is mysterious. It comes from the map in Terrell's monograph, but he does not cite a specimen. Considering that there are no recent collections from WV, ours might be disjunct depending on situation in Ohio.

This appears to be a species that was never very common in Pennsylvania. We are at the edge of its range. It is a calciphile, and the known occurrence is at a site with other calciphiles, some rare. The literature does suggest some tolerance to disturbance, but this part of the state has been reasonably well botanized in recent years (relative to the state in general), and it is not turing up.

This single known site is not under immediate threat, and is not likely to see habitat conversion, but it is privately owned, and there is no conservation agreement.

This species probably fell through the cracks because in the Wherry, Fogg, and Wahl Atlas it was treated as a variety of H. purpurea. Terrell concludes that it is distinct from that species.

Factors that decrease conservation concern
Appears to at least tolerate edge habitats.
Minuartia michauxii (Fenzl) Farw.

Current Status: watch list

Proposed Status (click for definitions): PT

Proposed by: Jessica McPherson
PNHP / Western PA Conservancy

Habitat: dry limestone outcrops; a few serpentine.

Estimated number of extant occurrences: (10) 18 – 40 (60)
Estimated number of extant individuals: () 180 – 4000 () Genets

Factors that increase conservation concern:
Typically occurs in small clumps on limestone outcrops, a small-patch habitat.

Factors that decrease conservation concern:

This species' primary habitat is limestone in the Ridge and Valley and Piedmont portions of the state. In these regions, limestone habitats have been converted to other land uses at rates of 70 - 95%. This species was never common, as indicated by the small number of dots on the atlas, and some of these locations have likely been lost. Limestone habitats remain vulnerable to loss from land use conversion and invasive species. Both limestone and serpentine areas where the species is known are commonly very small habitat fragments.
Morus rubra L.

Current Status

Proposed Status (click for definitions)

PT/PR

Proposed by: Jessica McPherson
PNHP / Western PA Conservancy

Habitat

NY flora atlas: "fairly local and populations are often small. Rich
dry to dry-mesic forests often on calcareous bedrock or soils. Not
weedy like M. alba." This describes western PA, Ridge &
Valley. PA flora - "rich, moist alluvial soils and wooded slopes"
Flora of Virginia: "well-drained floodplain forests, mesic and
dry-mesic upland forests, old fields, and fencerows; typically,
but not exclusively, in base-rich soils."

Estimated number of extant occurrences (12) – ()
Estimated number of extant individuals () – () Genets

Factors that increase conservation concern

Often occurs as few scattered individuals at a site. (USDA Silvics). Flora
of Virginia: "Red mulberry has become scarcer (especially as a tree) in
recent decades and is reported to be disappearing from portions of its
range. The cause is still uncertain but a bacterial disease is suspected."
Canadian ESA species report also cites susceptibility to a number of
diseases, exacerbated by sensitivity to air pollution and other
environmental stressors.

The persistence of this species is threatened by genetic swamping via
hybridization with Morus alba. Burgess et al. 2005 found asymmetrical
introgression in Morus rubra populations where Morus alba co-occurs.
Morus alba was more abundant at sites where they co-occurred; there
were several generations of hybrids, with Morus alba gene pool
becoming more dominant than Morus rubra. Burgess and Husband
2006 Ontario study found Morus rubra to be less fit than hybrids or
Morus alba. At some locations for historic populations in Canada, recent
searches have found only hybrids.

Pennsylvania is near the northern extent of the range (in Eastern U.S.);
environmental conditions here may be marginal for the species.

There is a dramatic decline in modern vs. historic collections (CM: 41
total, 5 since 1950, 3 since 1975). This may be reflective of combined
losses from habitat conversion, genetic swamping from Morus alba, and
disease. A large part of the species' range in PA is Great Valley &
Piedmont limestone and diabase forest habitats; these have suffered a
high rate of conversion to other land uses over the past century.
**Panicum amarum var. amarulum**

**Current Status**  
PE

**Proposed Status (click for definitions)**  
N

**Proposed by:**  
Steve Grund  
WPC/PHNP

**Habitat**  
From Weakley: "Coastal dunes and shores, sandflats, and sandhills...restricted to the Coastal Plain except for WV (where apparently introduced). Although well-marked individuals of var. amarulum and var. amarum are quite distinctive, only the number and structure of first glume nerves appears to be a constant over the range of the two taxa (Palmer 1975). Primarily a coastal plant, var. amarulum has been found in the Sandhills of NC (Richmond Co.). Blomquist 1948 says this taxon "does not seem to grow naturally in North Carolina." In Pennsylvania, collected in 1946 by Bayard Long in sand and gravel fill along the Delaware River. Erie County, waiting for info from Jim.

**Estimated number of extant occurrences**  
() – ()

**Estimated number of extant individuals**  
() – () Genets

**Factors that decrease conservation concern**  
The other variety also appears to be non-native in Pennsylvania
**Polygala senega L.**

**Current Status**

**Proposed Status (click for definitions)**  S2-S3

**Proposed by:** Jessica McPherson

**Habitat**  Calcareous rocky slopes and open woods.

**Estimated number of extant occurrences**  (10) 29 – 45 (60)

**Estimated number of extant individuals**  () 350 – 6000 () Genets

**Factors that increase conservation concern**

Calcareous slopes are typically a small-patch habitat

Over 80% of limestone areas in PA have been converted to other landuses; 17% remains in natural cover, most in extremely small fragments. Rate of conversion may be lower in habitat because it is steep, but still likely a great decrease. Species has been observed very rarely in the last three decades, with 10 known occurrences and 5-8 specimens since 1980; reasons for rarity of field observations despite surveys at many potential habitat sites not known, although possibly succession. Continued decline expected w/o protection because land use change continues to impact limestone sites, the plant may be dependent on semi-open conditions and succession will continue without fire or other disturbance, and limestone habitats are particularly vulnerable to invasive species.

(from NatureServe) The roots of Polygala senega have long been used medicinally as the product "Senega Snakeroot" (or similar names). The extent and intensity of collecting for the medicinal trade may be affecting significant populations or portions of its range, so that perhaps Polygala senega is being seriously changed genetically and in decline as a truly wild-functioning species. As well, there are a considerable number of states and provinces that have recognized vulnerability or even loss of populations within their areas of geographical expertise.

Also - The following paper indicates the two varieties should be a species. Trauth-Nare, A. E.*, and R. F. C. Naczi. 1998. Taxonomic status of the varieties of Seneca Snakeroot, Polygala senega (Polygalaceae). Suppl. to Amer. J. Bot. 85(6): 163.

**Factors that decrease conservation concern**
**Symphoricarpos albus (L.) S.F. Blake var. albus**

**Current Status**  
watch list

**Proposed Status (click for definitions)**  
PT

**Proposed by:** Jessica McPherson

**Habitat**  
Rocky, wooded, limestone slopes and barrens, also escaped from cultivation.

**Estimated number of extant occurrences**  
(12) 18 – 30 (60)

**Estimated number of extant individuals**  
() 130 – 500 () Genets

**Factors that increase conservation concern**

Symphoricarpos albus var. laevigatus is native further west & cultivated here; var. albus potentially vulnerable to genetic swamping.

There are few historic collections for this species, suggesting it was never common. Over 80% of limestone area in the state has been converted to other landuses. This species is documented primarily from the Ridge and Valley, where about 30% of limestone area remains in natural cover; its habitat preference for dry rocky slopes may mean it has been converted less than the overall rate for the region, but there has still probably been significant loss. Limestone habitats remain under threat from development, quarrying, and invasive species.

**Factors that decrease conservation concern**

Additional factors not logically included on other worksheets

State/Province Conservation Status

- SX: Extirpated
- SN: Possibly Extirpated
- S1: Critically Imperiled
- S2: Imperiled
- S3: Vulnerable
- SA: Apparently Extinct
- SB: Secure
- Not: Listed/Not a Species (SHW/FLC)

Additional factors not logically included on other worksheets
**Symphyotrichum praealtum** *(Poir.) G.L. Nesom*

**Current Status**
TU

**Proposed Status (click for definitions)**
N

**Proposed by:** Loree speedy

**Habitat**
Wide variety reported in FNA Vol. 20: Wet, loamy soils, wet prairies or meadows, lake and stream shores, oak savannas, open woods or thickets, fields, moist banks, ditches, roadsides, recent clearings

**Estimated number of extant occurrence** (50) 5 – 1000 (100)

**Estimated number of extant individuals** (50000) 10000 – 500000 (100000) Ramets

**Factors that increase conservation concern**
None

The Second Edition of Strasbaugh and Core's Flora of West Virginia reports this Aster as "uncommon (or not recognized)."

**Factors that decrease conservation concern**

Extant populations in Fayette, Westmoreland, and Indiana do not appear to have a limit or boundary to their extents, i.e., it appears that the population may extend along a suitable road or watercourse or woodland edge habitat for as long as habitat is available.

Habitats of extant occurrences range from old fields, nursery, logging roads, open wetlands, ditches, drained reservoirs to decent wetlands. Quite often found in this degraded, disturbed habitat, more often than in intact woods or wetlands. Historic collection label data often mention roadside or edges.

Recent observations show it is growing in areas disturbed by strip-mining, road construction, logging, and clearing. Perennial and clonal; known to produce extensive colonial stands with tangled horizontal rhizomes (Jones, 1978). Many-branched, many-headed, about 30 disk flowers. No apparent limitations to pollination, seed set or seed viability.

The species is likely unrecognized due to its resemblance to common old field asters like *S. lanceolatum* (and its varieties), *S. pilosum*, *S. puniceum*, *S. lateriflorum*. Keys rely on cryptic character of squarish areolae.

Species is tolerant of disturbance and appears to favor edge habitat so it probably experienced at the least a slight increase in population.
**Wolffiella gladiata** (Hegelm.) Hegelm.

**Current Status**  
PR

**Proposed Status**  
N

**Proposed by:** Steve Grund, PNHP, WPC

**Habitat**  
Glacial lakes and associated wetlands.

**Estimated number of extant occurrences**  
(8) 10 – 15 (20)

**Estimated number of extant individuals**  
(8k) 10k – 50k (1,000,000)

**Factors that decrease conservation concern**

Does well with nutrient loading.

Might be mistaken for an algae

Recent work has revealed great expansion of the Hartstown population, and a newly discovered population in Conneaut Outlet.

7 of the 8 known occurrences are on SGL.

This species was not known from Pennsylvania until Bissell discovered it in 1984 at Pymatuning. The distribution is odd, suggesting that it may be adventive in Pennsylvania. It appears to be expanding, and the high-quality sites it inhabits harbor other rare species that will trigger environmental reviews.