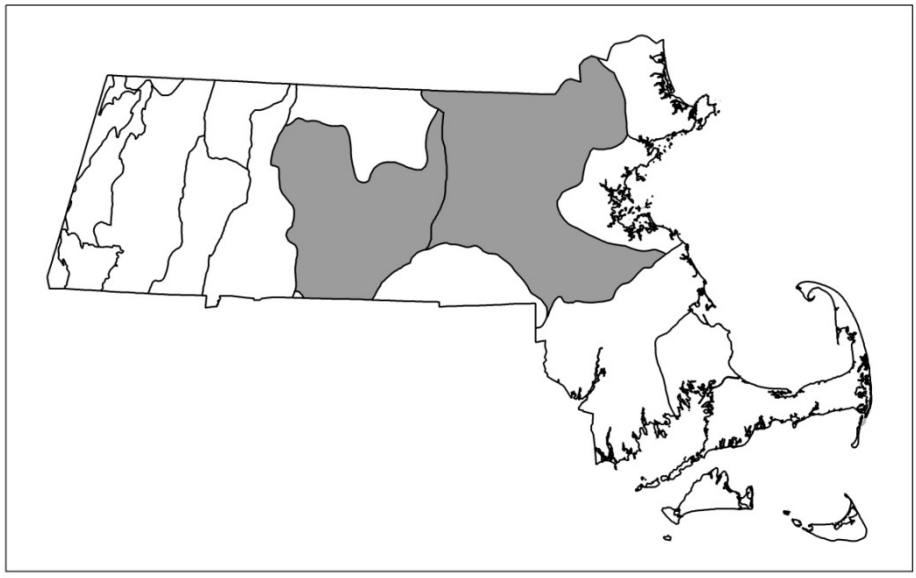
Open Talus/Coarse Boulder Community

Community Code: CT2A2D0000

State Rank: S2



Concept: Sparsely vegetated community of vines and scattered herbaceous plants on exposed moss- or lichen-covered boulders, with deciduous litter in crevices and little to no tree canopy.

Environmental Setting: Open Talus/Coarse Boulder Communities are usually below cliffs or rock outcrops or in boulder fields left by glaciers. Sparse vines and scattered herbaceous plants grow in dry, shallow soil or from moist, loamy, deciduous-litter-filled crevices among moss- or lichen-covered boulders. The Open Talus/Coarse Boulder Community may be replaced lower on the slope by a forest or woodland type, if tree canopy cover is greater than 25%. There may be a gradient from short, sparse vegetation on exposed rocks at the top of the talus slope, through scattered, clumped, somewhat dwarfed trees and tall shrubs, to forest at the base of the slope. Open talus occurs in Massachusetts where there are bedrock outcrops high enough to break off and fall to create talus slopes.

Vegetation Description: In unshaded, open talus communities, lichens often cover the exposed rocks. Growing from between rocks, rock polypody (*Polypodium virginianum*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), and occasionally fringed bindweed (*Fallopia cilinodis*) contribute to the herbaceous and vine flora which can be quite sparse. Clematis (*Clematis* spp.), climbing fumitory (*Adlumia fungosa*), marginal wood fern (*Dryopteris marginalis*), and pink corydalis (*Capnoides sempervirens*) may be present, particularly when the talus is formed by less acidic rocks. Raspberries (*Rubus* spp.) and grapes vines (*Vitis* spp.) are sometimes abundant. The plants of talus slopes reflect the regional vegetation where they occur.

Differentiating Occurrences: Rocky summits, rock outcrops, rock cliffs, and talus all support natural communities adjacent to and grading into each other, all within and reflecting the surrounding matrix forest. Forested areas lower in the talus slope/ boulder field are considered to be a different community, usually part of the prevailing forest. Acidic, Circumneutral, and Calcareous Rock Cliff Communities are on vertical to near vertical (~60% slope), with sparse vegetation that is similar to the vegetation of Open Talus/Coarse Boulder Communities. Open Talus/Coarse Boulder communities are on broken rocks on a slope rather than on near-vertical cliffs with continuous rock. Rocky summit/rock outcrop communities also have bare rock and could be confused with Open Talus/Coarse Boulder Communities which have broken rock rather than the smoother bedrock of outcrops. Small (<5000 sq. ft.) occurrences of Open Talus at the base of cliffs would be included with the cliff or surrounding forest as appropriate to the size and site. Or if the Open Talus is larger than the Cliff or outcrop, it might be named as the community type with the other small part as variation within it.

Associated Fauna: Most animals respond to the size of boulders, cover, moisture, and surroundings of the talus slope. Porcupines (*Erethizon dorsatum*) den in large boulder fields and turkey vultures (*Cathartes aura*) make nests in other large boulder fields, but snakes, for example, north American racer (*Coluber constrictor*), eastern milk snake (*Heterodon platirhinos*), eastern ratsnake (*Pantherophis alleghaniensis*) and timber rattlesnakes (*Crotalus horridus*), hibernate in dens in talus with smaller stones. For many animals associated with talus slopes, the talus is just part of their larger habitat that includes adjacent rock habitats and surrounding forests; the animals may move among them over the course of a day, a season, or a year. Songbirds of talus slopes tend to be those of the surrounding forests.

Public Access: Palmer WMA, Palmer; Blue Hills State Reservation, Milton.

Threats: Invasives including Oriental bittersweet (*Celastrus orbiculatus*) and black nightshade (*Solanum dulcamara*). Alteration of surrounding areas, such as by development, would fragment and reduce the overall habitat available for those species for which talus is only part of their habitats. Several of the species of talus slopes, such as some of the snakes, do best away from humans. Protecting areas around the talus slopes that provide their habitat is the best way to protect them and the other species that depend on these habitats.

Management Needs: The calcium enrichment and moistness of the lower areas of the circumneutral and calcareous talus slopes attract invasive exotic species as well as the native species. Because invasive exotic species often enter a natural community after some form of disturbance, restricting human-derived disturbances would help keep invasive species out. However, since natural disturbances are part of the normal processes in talus, the best occurrences need to be monitored for invasive species. They should be controlled and removed where practical. Although acidic talus is much less attractive to invasive species than the richer areas, excellent occurrences should also be monitored.

USNVC/NatureServe: *Polypodium* (*virginianum*, *appalachianum*)/Lichen spp. Nonvascular Vegetation (CEGL006534); System: Laurentian-Acadian Acidic Cliff and Talus (CES201.569). Possibly *Quercus rubra - Betula lenta*/*Polypodium virginianum* Woodland CEGL006585 which is <50% canopy with large acidic talus boulders (but includes circumneutral species).