Taxon: Cerastium fontanum **Family:** Caryophyllaceae

Common Name(s): common mouse-ear
common mouse-ear chickweed
mouse-ear chickweed

Synonym(s): Cerastium caespitosum Gilib. ex
Cerastium fontanum subsp. triviale
Cerastium holosteoides Fr.
Cerastium triviale Link
Cerastium vulgare Hartm.

Assessor: Chuck Chimera **Status:** Assessor Approved **End Date:** 6 Nov 2015

WRA Score: 11.5 **Designation:** H(HPWRA) **Rating:** High Risk

Keywords: Herbaceous Weed, Temperate, Widely Naturalized, Mat-Forming, Wind-Dispersed

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	(0-low; 1-intermediate; 2-high) (See Appendix 2)	Low
202	Quality of climate match data	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
203	Broad climate suitability (environmental versatility)	y=1, n=0	y
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	y
205	Does the species have a history of repeated introductions outside its natural range?	y=-2, ?=-1, n=0	y
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n= question 205	y
302	Garden/amenity/disturbance weed	n=0, y = 1*multiplier (see Appendix 2)	y
303	Agricultural/forestry/horticultural weed		
304	Environmental weed		
305	Congeneric weed	n=0, y = 1*multiplier (see Appendix 2)	y
401	Produces spines, thorns or burrs	y=1, n=0	n
402	Allelopathic	y=1, n=0	n
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals	y=1, n=-1	n
405	Toxic to animals	y=1, n=0	n
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	n

Qsn #	Question	Answer Option	Answer
408	Creates a fire hazard in natural ecosystems	y=1, n=0	n
409	Is a shade tolerant plant at some stage of its life cycle		
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0	y
411	Climbing or smothering growth habit	y=1, n=0	n
412	Forms dense thickets	y=1, n=0	n
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally	y=1, n=-1	y
604	Self-compatible or apomictic	y=1, n=-1	y
605	Requires specialist pollinators	y=-1, n=0	n
606	Reproduction by vegetative fragmentation	y=1, n=-1	y
607	Minimum generative time (years)	1 year = 1, 2 or 3 years = 0, 4+ years = -1	1
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)		
702	Propagules dispersed intentionally by people	y=1, n=-1	n
703	Propagules likely to disperse as a produce contaminant	y=1, n=-1	y
704	Propagules adapted to wind dispersal	y=1, n=-1	y
705	Propagules water dispersed		
706	Propagules bird dispersed		
707	Propagules dispersed by other animals (externally)	y=1, n=-1	y
708	Propagules survive passage through the gut	y=1, n=-1	y
801	Prolific seed production (>1000/m2)	y=1, n=-1	y
802	Evidence that a persistent propagule bank is formed (>1 yr)	y=1, n=-1	y
803	Well controlled by herbicides	y=-1, n=1	y
804	Tolerates, or benefits from, mutilation, cultivation, or fire	y=1, n=-1	n
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

Supporting Data:

Qsn #	Question	Answer
101	**Is the species highly domesticated?**	**n**
	Source(s)	**Notes**
	Grime, J.P., Hodgson, J.G. & Hunt, R. (2014). Comparative Plant Ecology: A Functional Approach to Common British Species. Springer, Dordrecht, Netherlands	No evidence of domestication

102	**Has the species become naturalized where grown?**	
	Source(s)	**Notes**
	WRA Specialist. 2015. Personal Communication	NA

103	**Does the species have weedy races?**	
	Source(s)	**Notes**
	WRA Specialist. 2015. Personal Communication	NA

201	**Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"**	**Low**
	Source(s)	**Notes**
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/. [Accessed 4 Nov 2015]	"Native: AFRICA Macaronesia: Portugal - Madeira Islands; Spain - Canary Islands Northern Africa: Algeria; Morocco ASIA-TEMPERATE Western Asia: Turkey Siberia: Russian Federation - Eastern Siberia, Western Siberia EUROPE Northern Europe: Denmark; Finland; Iceland; Ireland; Norway; Sweden; United Kingdom Middle Europe: Austria; Belgium; Czech Republic; Germany; Hungary; Netherlands; Poland; Slovakia; Switzerland East Europe: Belarus; Estonia; Latvia; Lithuania; Moldova; Russian Federation - European part; Ukraine [incl. Krym] Southeastern Europe: Albania; Bosnia and Herzegovina; Bulgaria; Croatia; Greece; Italy [incl. Sardinia, Sicily]; Macedonia; Montenegro; Romania; Serbia; Slovenia Southwestern Europe: France [incl. Corsica]; Portugal; Spain [incl. Baleares]"

Qsn #	Question	Answer
202	**Quality of climate match data**	**High**
	Source(s)	**Notes**
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/. [Accessed 4 Nov 2015]	

203	**Broad climate suitability (environmental versatility)**	**y**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Broad elevation range, demonstrates environmental versatility] "Native to Eurasia, widely naturalized; in Hawai'i naturalized in usually wet to sometimes dry, disturbed habitats, 0-3,900 m,"

204	**Native or naturalized in regions with tropical or subtropical climates**	**y**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Native to Eurasia, widely naturalized; in Hawai'i naturalized in usually wet to sometimes dry, disturbed habitats, 0-3,900 m, on all of the main islands except Ni'ihau and Kaho'olawe. Naturalized on Maui prior to 1871 (Hillebrand, 1888).-"

205	**Does the species have a history of repeated introductions outside its natural range?**	**y**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Native to Eurasia, widely naturalized"

301	**Naturalized beyond native range**	**y**
	Source(s)	**Notes**
	Medeiros, A.C., Loope, L.L. & Chimera, C.G. 1998. Flowering Plants and Gymnosperms of Haleakala National Park. Technical Report 120. Pacific Cooperative Studies Unit, Honolulu, HI	"Crater; west Kaupo Gap; Klpahulu Valley; Manawainui; NE rift; West slope. Matted, short-lived perennial herb with hirsute stems and leaves"
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"in Hawai'i naturalized in usually wet to sometimes dry, disturbed habitats, 0-3,900 m, on all of the main islands except Ni'ihau and Kaho'olawe. Naturalized on Maui prior to 1871 (Hillebrand, 1888).-"
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/. [Accessed 4 Nov 2015]	"Naturalized: AFRICA Macaronesia: Portugal - Azores naturalized throughout temperate regions "

302	**Garden/amenity/disturbance weed**	**y**

Qsn #	Question	Answer
	Source(s)	**Notes**
	Flora of North America Editorial Committee. (2005). Flora of North America: north of Mexico. Magnoliophyta: Caryophyllidae. Caryophyllales. Volume 5, Part 2. Oxford University Press, Oxford, UK	"A common weed in grassy places: lawns, roadsides, pastures, open woodlands, wastelands; 0-3000 m; introduced"
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Cerastium fontanum cited in a number of references as naturalized and/or a weed] "1262-E, 1259-E, 1229-N, 1215-N, 1209- A, 1203-W, 1193-A, 1185-A, 1122-vG, 1081-EI, 1007-N, 983-I, 945-N, 819-N, 788-W, 765-N, 756-UC, 725-NI, 636-N, 505-E, 425-NW, 403-W, 396-N, 322-A, 280-N, 272-W, 243-A, 207-AW, 195-E, 176-N, 165-W, 151-E, 101-N, 94-A, 85- N, 72-E, 70-W"

303	Agricultural/forestry/horticultural weed	
	Source(s)	**Notes**
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	Cited as a weed of agriculture. Impacts unknown

304	Environmental weed	
	Source(s)	**Notes**
	Medeiros, A.C., Loope, L.L. & Chimera, C.G. 1998. Flowering Plants and Gymnosperms of Haleakala National Park. Technical Report 120. Pacific Cooperative Studies Unit, Honolulu, HI	"Crater; west Kaupo Gap; Klpahulu Valley; Manawainui; NE rift; West slope." [Not identified as a significant weed of Haleakala National Park]
	Howell, C. (2008). Consolidated list of environmental weeds in New Zealand. DOC Research & Development Series 292. Science & Technical Publishing Department of Conservation, Wellington, New Zealand	[Generally not considered problem weeds] "After the establishment of DOC in 1987, this was the first formal list produced regarding the status of weeds on DOC-managed land (Williams & Timmins 1990)." ... "Cerastium fontanum and Poa annua were included as they were being controlled on the Snares Islands, but were generally not considered problem weeds on mainland New Zealand."
	Alaska Natural Heritage Program. (2011). common mouse-ear chickweed - Cerastium fontanum ssp. vulgare (Hartman) Greuter & Burdet. sticky chickweed - Cerastium glomeratum Thuill. University of Alaska, Anchorage. http://aknhp.uaa.alaska.edu. [Accessed 4 Nov 2015]	[No evidence from Alaska] "Impact on community composition, structure, and interactions: Common mouse-ear chickweed and sticky chickweed have not been observed in undisturbed plant communities in Alaska, and their impacts on native community composition have not been documented. These species are known hosts for some nematode species (Townshend and Davidson 1962)."
	Loope, L.L., Nagata, R.J. & Medeiros, A.C. 1992, Alien plants in Haleakala National Park Pp. 551-576 in Stone et al (eds) Alien plant invasions in native ecosystems of Hawaii. Coop. Nat. Park Resources Studies Unit, University of Hawaii, Honolulu, HI	Not identified as a significant weed of Haleakala National Park

305	Congeneric weed	y
	Source(s)	**Notes**

Qsn #	Question	Answer
	Wilen, C. A. (2006). Chickweeds. Integrated Pest Management for Home Gardeners and Landscape Professionals. Pest Notes. Publication 74129. University of California, Agriculture and Natural Resources, Oakland, CA. http://www.ipm.ucdavis.edu. [Accessed]	"In turf and landscape plantings, common and sticky chickweed can be unsightly, reducing the aesthetic value. In cool, wet conditions common chickweed forms a dense mat of spreading stems that may root at the nodes. This increases the difficulty of hand weeding or hoeing."
	Randall, R.P. 2012. A Global Compendium of Weeds. 2nd Edition. Department of Agriculture and Food, Western Australia	[Classified as a weed in a number of references] "Cerastium arvense L. Caryophyllaceae See: Cerastium arvense L. var. viscidulum Gremli Cultivated Refs: 42 1278-N, 1266-A, 1245-E, 1243-N, 1240- W, 1238-W, 1229-N, 998-A, 983-I, 931- A, 927-A, 919-N, 883-W, 876-NI, 819-N, 794-N, 790-X, 765-N, 736-E, 711-N, 642-A, 636-N, 543-A, 519-N, 431-W, 388-W, 300-N, 299-XW, 280-N, 272-W, 243-A, 241-N, 218-W, 162-W, 161-W, 136-AW, 101-N, 94-A, 87-W, 85-N, 70- W, 42-N"

401	Produces spines, thorns or burrs	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[No evidence] "Matted, short-lived perennial herbs with short, depressed, basal, lateral shoots; stems 3-7 dm long, hirsute to sometimes glandular. Leaves oblanceolate to oblong or elliptic-ovate, 10-25 mm long, 3-10 mm wide, both surfaces conspicuously hirsute, sessile."

402	Allelopathic	n
	Source(s)	**Notes**
	Carlson, M.L., Lapina, I.V. Shephard, M., Conn, J.S., Densmore, R., Spencer, P., Heys, J., Riley, J., & Nielsen, J. (2008). Invasiveness Ranking System for Non-Native Plants of Alaska. USDA Forest Service, Alaska Region R10-TP-143	"Common mouse-ear chickweed and sticky chickweed are not known to be allelopathic."

403	Parasitic	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Matted, short-lived perennial herbs..." [Caryophyllaceae. No evidence]

404	Unpalatable to grazing animals	n
	Source(s)	**Notes**
	Diaz, A. (2000). Can plant palatability trials be used to predict the effect of rabbit grazing on the flora of ex-arable land?. Agriculture, Ecosystems & Environment, 78 (3): 249-259	"Table 3 The total number of plants of each species that were nibbled by rabbits (maxD20 per plot)" [Cerastium fontanum palatable to rabbits]
	Stewart, G.B. & Pullin, A.S. 2006. Does sheep-grazing degrade unimproved neutral grasslands managed as pasture in lowland Britain? CEE review 05-009 (SR15). Collaboration for Environmental Evidence: www.environmentalevidence.org/SR15.html	"There was also a reduction in forb biomass and diversity, although Ranunculus bulbosus and Cerastium fontanum persist. Both these forbs are dependent upon the debilitation of potential dominants for survival and are therefore frequent in grazed habitats although Cerastium fontanum is eaten by cattle and appears sensitive to trampling (Grime et al. 1992)."

Qsn #	Question	Answer
	Bossuyt, B., De Fre, B., & Hoffmann, M. (2005). Abundance and flowering success patterns in a short-term grazed grassland: early evidence of facilitation. Journal of Ecology, 93(6): 1104-1114	"There was clear evidence for a facilitation effect, expressed by a higher abundance and flowering success of several palatable species when they were associated with a high cover of an unpalatable species." ... "The effect of this grazing avoidance had become significant for several palatable species (e.g. Agrostis stolonifera, Cerastium fontanum, Holcus lanatus, Juncus subnodulosus, Rubus caesius) by only 3 years after the start of year-round grazing. These species reached a higher abundance in association with an unpalatable species or/and produced more inflorescences."

405	Toxic to animals	n
	Source(s)	**Notes**
	Wagstaff, D.J. 2008. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence [palatable to browsing & grazing animals]

406	Host for recognized pests and pathogens	
	Source(s)	**Notes**
	Groves, R. L., Walgenbach, J. F., Moyer, J. W., & Kennedy, G. G. (2002). The role of weed hosts and tobacco thrips, Frankliniella fusca, in the epidemiology of Tomato spotted wilt virus. Plant Disease, 86(6): 573-582	[Cerastium vulgatum = syn for Cerastium fontanum subsp. vulgare] "Wild plant species were systematically sampled to characterize reproduction of thrips, the vector of Tomato spotted wilt virus (TSWV), and natural sources TSWV infection. Thrips populations were monitored on 28 common perennial, biennial, and annual plant species over two noncrop seasons at six field locations across North Carolina. Sonchus asper, Stellaria media, and Taraxacum officinale consistently supported the largest populations of immature TSWV vector species. The tobacco thrips, Frankliniella fusca, was the most abundant TSWV vector species collected, comprising over 95% of vector species in each survey season. Perennial plant species (i.e., Plantago rugelii and Taraxacum officinale) were often only locally abundant, and many annual species (Cerastium vulgatum, Sonchus asper, and Stellaria media) were more widely distributed."

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	**Notes**
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	"Anthelmintic, cooling, febrifuge" [No evidence. Medicinal]
	Wagstaff, D.J. 2008. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence

Qsn #	Question	Answer
408	**Creates a fire hazard in natural ecosystems**	**n**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Unlikely to contribute significant fuel load] "Matted, short-lived perennial herbs with short, depressed, basal, lateral shoots" ... "in Hawai'i naturalized in usually wet to sometimes dry, disturbed habitats"
	Zimmer, H., Cheal, D.& Cross, E. 2012. Post-fire Weeds Triage Manual: Black Saturday Victoria 2009– Natural values fire recovery program. Department of Sustainability and Environment, Heidelberg, Victoria	No evidence

409	**Is a shade tolerant plant at some stage of its life cycle**	
	Source(s)	**Notes**
	Plants for a Future. 2015. Cerastium fontanum. http://www.pfaf.org/user/Plant.aspx?LatinName=Cerastium+fontanum. [Accessed 5 Nov 2015]	"It can grow in semi-shade (light woodland). It prefers moist soil."
	Hilty, J. 2015. Weedy Wildflowers of Illinois - Common Mouse Eared Chickweed - Cerastium fontanum. http://www.illinoiswildflowers.info/weeds/plants/cmme_chickweed.htm. [Accessed 5 Nov 2015]	"The preference is full sun to light shade and moist to slightly dry conditions."

410	**Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)**	**y**
	Source(s)	**Notes**
	Grime, J.P., Hodgson, J.G. & Hunt, R. (2014). Comparative Plant Ecology: A Functional Approach to Common British Species. Springer, Dordrecht, Netherlands	"Soil pH. Found over a wide range of values, but infrequent below pH 4.5. Bare soil. Occurring in association with a wide range of values."
	Hilty, J. 2015. Weedy Wildflowers of Illinois - Common Mouse Eared Chickweed - Cerastium fontanum. http://www.illinoiswildflowers.info/weeds/plants/cmme_chickweed.htm. [Accessed 5 Nov 2015]	"This plant can tolerate a broad range of soils, including those that contain loam, clay-loam, and pebbly or gravelly material. Common Mouse-Eared Chickweed is more often found in fertile soil than other Cerastium spp. (Mouse-Eared Chickweeds). It is a larger plant that can tolerate more competition from other kinds of vegetation."

411	**Climbing or smothering growth habit**	**n**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Matted, short-lived perennial herbs with short, depressed, basal, lateral shoots; stems 3-7 dm long, hirsute to sometimes glandular."

412	**Forms dense thickets**	**n**
	Source(s)	**Notes**
	Carlson, M.L., Lapina, I.V. Shephard, M., Conn, J.S., Densmore, R., Spencer, P., Heys, J., Riley, J., & Nielsen, J. (2008). Invasiveness Ranking System for Non-Native Plants of Alaska. USDA Forest Service, Alaska Region R10-TP-143	"Common mouse-ear chickweed and sticky chickweed do not form dense patches in Alaska (M. Carslon pers. obs.)."

Qsn #	Question	Answer
	Grime, J.P., Hodgson, J.G. & Hunt, R. (2014). Comparative Plant Ecology: A Functional Approach to Common British Species. Springer, Dordrecht, Netherlands	"Gregariousness Sparse to intermediate, but occasionally forming patches."
	Kaczmarek, F.S. (2009). New England Wildflowers: A Guide to Common Plants. The Globe Pequot Press, Guilford, CT	"The stems can root at the nodes. allowing it to form dense mats."

501	Aquatic	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[Terrestrial herb] "Matted, short-lived perennial herbs ... in Hawai'i naturalized in usually wet to sometimes dry, disturbed habitats..."

502	Grass	n
	Source(s)	**Notes**
	USDA, ARS, National Genetic Resources Program. 2015. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/. [Accessed 4 Nov 2015]	"Family: Caryophyllaceae subfamily: Alsinoideae tribe: Alsineae"

503	Nitrogen fixing woody plant	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Matted, short-lived perennial herbs with short, depressed, basal, lateral shoots..." [Caryophyllaceae]

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	**Notes**
	UC IPM. 2014. Mouseear chickweed (Cerastium fontanum ssp. vulgare). Agriculture and Natural Resources, UC Davis, CA. http://www.ipm.ucdavis.edu/PMG/WEEDS/mouseear_chickweed.html. [Accessed 4 Nov 2015]	"Mouseear chickweed grows up to about 20 inches (0.5 m) long. It is a hairy plant with creeping matlike stems that root from the stem joints (nodes). "

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	[No evidence] "Native to Eurasia, widely naturalized"

602	Produces viable seed	y

Qsn #	Question	Answer
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Capsules cylindrical, curved, 9-12 mm long. Seeds reddish brown, 0.4-0.8 mm long, tuberculate."
	UC IPM. 2014. Mouseear chickweed (Cerastium fontanum ssp. vulgare). Agriculture and Natural Resources, UC Davis, CA. http://www.ipm.ucdavis.edu/PMG/WEEDS/mouseear_chickweed.html. [Accessed 4 Nov 2015]	"Mouseear chickweed reproduces by seed, but sometimes reproduces by creeping stems that root from the stem joints (nodes)."

603	**Hybridizes naturally**	**y**
	Source(s)	**Notes**
	Stace, C. , van der Meijden, R. (ed.) & de Kort, I. (ed.). 2015. Interactive Flora of NW Europe - Cerastium fontanum. http://wbd.etibioinformatics.nl/bis/flora.php menuentry=soorten&id=1915. [Accessed 5 Nov 2015]	"Hybrids - Cerastium x pseudoalpinum Murr (= Cerastium arvense x Cerastium fontanum) has occurred in 3 places in Co Durham and South Lincs in rough grassland with the parents; it resembles Cerastium arvense but with smaller flowers, wider leaves and denser pubescence, and is sterile. - Cerastium x richardsonii Druce (= Cerastium nigrescens x Cerastium fontanum) has been found with the parents in North Wales and North Scotland; it is intermediate but with petals as long as those of Cerastium arcticum and is largely sterile. - Cerastium x symei Druce (= Cerastium alpinum x Cerastium fontanum) occurs on mountains in Scotland with both parents; it is intermediate in pubescence and flower-size and -number and is sterile."
	National Biodiversity Network. 2015. Cerastium alpinum x fontanum = C. x symei Druce. https://data.nbn.org.uk/Taxa/NHMSYS0001754710. [Accessed 5 Nov 2015]	Species hybrid
	National Biodiversity Network. 2015. Cerastium arvense x fontanum = C. x pseudoalpinum Murr. https://data.nbn.org.uk/Taxa/NHMSYS0001754779. [Accessed 5 Nov 2015]	Species hybrid

604	**Self-compatible or apomictic**	**y**
	Source(s)	**Notes**
	Grime, J.P., Hodgson, J.G. & Hunt, R. (2014). Comparative Plant Ecology: A Functional Approach to Common British Species. Springer, Dordrecht, Netherlands	"Flowers White, hermaphrodite, protandrous, selfed or insect-pollinated"
	Jelbert, K., Stott, I., McDonald, R. A., & Hodgson, D. (2015). Invasiveness of plants is predicted by size and fecundity in the native range. Ecology and Evolution, 5 (10): 1933-1943	"Table 1. Species pairs: life-form, breeding system, status, and mean seed production per inflorescence." [Cerastium fontanum - Breeding System = Hermaphrodite; protoandrous; automatic self or cross]

605	**Requires specialist pollinators**	**n**

Qsn #	Question	Answer
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai'i Press and Bishop Museum Press, Honolulu, HI.	"Flowers in terminal, rather compact, dichotomous cymes, but in fruit becoming more open and the lower pedicels divergent to reflexed and 2-4 times as long as calyx; sepals 3-6.5 mm long, hirsute, margins scarious; petals white, 4-5 mm long, apex slightly cleft." [No evidence from floral morphology]
	Grime, J.P., Hodgson, J.G. & Hunt, R. (2014). Comparative Plant Ecology: A Functional Approach to Common British Species. Springer, Dordrecht, Netherlands	"Flowers White, hermaphrodite, protandrous, selfed or insect-pollinated"
	Holden, P. & Abbott, G. 2008. RSPB Handbook of Garden Wildlife. A & C Black Publishers, London, UK	"Self-pollinated." ... "The flowers are visited by very small insects, mostly flies."

606	Reproduction by vegetative fragmentation	y
	Source(s)	**Notes**
	UC IPM. 2014. Mouseear chickweed (Cerastium fontanum ssp. vulgare). Agriculture and Natural Resources, UC Davis, CA. http://www.ipm.ucdavis.edu/PMG/WEEDS/mouseear_chickweed.html. [Accessed 4 Nov 2015]	"Mouseear chickweed reproduces by seed, but sometimes reproduces by creeping stems that root from the stem joints (nodes)."
	Beidleman, L.H., Beidleman, R.G. & Willard, B.E. (2000). Plants of Rocky Mountain National Park. Falcon Publishing, Helena, MT	"This species is an annual and often forms mats with rooting stems."

607	Minimum generative time (years)	1
	Source(s)	**Notes**
	UC IPM. 2014. Mouseear chickweed (Cerastium fontanum ssp. vulgare). Agriculture and Natural Resources, UC Davis, CA. http://www.ipm.ucdavis.edu/PMG/WEEDS/mouseear_chickweed.html. [Accessed 4 Nov 2015]	"Mouseear chickweed is a prostrate perennial broadleaf plant that can behave like a biennial or annual in disturbed places."

701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	
	Source(s)	**Notes**
	Alaska Natural Heritage Program. (2011). common mouse-ear chickweed - Cerastium fontanum ssp. vulgare (Hartman) Greuter & Burdet. sticky chickweed - Cerastium glomeratum Thuill. University of Alaska, Anchorage. http://aknhp.uaa.alaska.edu. [Accessed 4 Nov 2015]	"Common mouse-ear chickweed grows in roadsides, waste places, gardens, and fields."
	Kaczmarek, F.S. (2009). New England Wildflowers: A Guide to Common Plants. The Globe Pequot Press, Guilford, CT	"Fields. roadsides. and waste areas."
	Mouissie, A. M., Lengkeek, W., & Van Diggelen, R. (2005). Estimating adhesive seed-dispersal distances: field experiments and correlated random walks. Functional Ecology, 19(3): 478-486	[Probably Yes. Occurs in heavily trafficked areas] "Not only seed appendages can aid attachment to fur, but also larger parts of the fruiting branch and vegetative parts, as we observed in Cerastium fontanum, E. tetralix and C. vulgaris."

Qsn #	Question	Answer
702	**Propagules dispersed intentionally by people**	**n**
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai‘i Press and Bishop Museum Press, Honolulu, HI.	"widely naturalized; in Hawai'i naturalized in usually wet to sometimes dry, disturbed habitats, 0-3,900 m, on all of the main islands except Ni'ihau and Kaho'olawe. Naturalized on Maui prior to 1871 (Hillebrand, 1888)." [Long history of naturalization. No current evidence of intentional introduction]

703	**Propagules likely to disperse as a produce contaminant**	**y**
	Source(s)	**Notes**
	Salt, C. A., Mayes, R. W., & Elston, D. A. (1992). Effects of season, grazing intensity and diet composition on the radiocaesium intake by sheep on re-seeded hill pasture. Journal of Applied Ecology, 29(2): 378-387	"It would be desirable to reduce the amount of Cerastiumf ontanumi n the sward. This may however not be easy to achieve since C. fontanum is probably introduced to hill pastures as a contaminant of commercial seed supplies of Trifoliumr epens and Phleum pretense (Fryer & Makepace 1977)."
	Alaska Natural Heritage Program. (2011). common mouse-ear chickweed - Cerastium fontanum ssp. vulgare (Hartman) Greuter & Burdet. sticky chickweed - Cerastium glomeratum Thuill. University of Alaska, Anchorage. http://aknhp.uaa.alaska.edu. [Accessed 4 Nov 2015]	"Potential to be spread by human activity: Common mouse-ear chickweed grows in gardens and lawns. It can be transported with horticultural stock (Hodkinson and Thompson 1997)."

704	**Propagules adapted to wind dispersal**	**y**
	Source(s)	**Notes**
	Vittoz, P., & Engler, R. (2007). Seed dispersal distances: a typology based on dispersal modes and plant traits. Botanica Helvetica, 117(2): 109-124	"Cerastium fontanum subsp. vulgare" [Seeds categorized as dispersed by Boleochory. Boleochory (semachory) is another mode used by anemochorous plants. The small seeds without particular features are spread when the fruit is shaken by wind. At maturity, the stem of such plants is often rigid but elastic and sways in the wind, acting like a catapult."

705	**Propagules water dispersed**	
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai‘i Press and Bishop Museum Press, Honolulu, HI.	[Small seeds may possibly be dispersed by overland flow of water] "Seeds reddish brown, 0.4-0.8 mm long, tuberculate" ... "in Hawai'i naturalized in usually wet to sometimes dry, disturbed habitats"

Qsn #	Question	Answer
706	**Propagules bird dispersed**	
	Source(s)	**Notes**
	Alaska Natural Heritage Program. (2011). common mouse-ear chickweed - Cerastium fontanum ssp. vulgare (Hartman) Greuter & Burdet. sticky chickweed - Cerastium glomeratum Thuill. University of Alaska, Anchorage. http://aknhp.uaa.alaska.edu. [Accessed 4 Nov 2015]	"Potential for long-distance dispersal: Seabirds probably have some role in the transportation of seeds. Viable seeds of Cerastium species were found in the pellets of sea gulls (Gillham 1956)."
	Holden, P. & Abbott, G. 2008. RSPB Handbook of Garden Wildlife. A & C Black Publishers, London, UK	"The seed capsules are always close to the ground, and are eaten by sparrows, finches and Dunnock." [Presumably act as seed predators]

707	**Propagules dispersed by other animals (externally)**	**y**
	Source(s)	**Notes**
	Mouissie, A. M., Lengkeek, W., & Van Diggelen, R. (2005). Estimating adhesive seed-dispersal distances: field experiments and correlated random walks. Functional Ecology, 19(3): 478-486	"Not only seed appendages can aid attachment to fur, but also larger parts of the fruiting branch and vegetative parts, as we observed in Cerastium fontanum, E. tetralix and C. vulgaris."

708	**Propagules survive passage through the gut**	**y**
	Source(s)	**Notes**
	Pakeman, R. J., Digneffe, G., & Small, J. L. (2002). Ecological correlates of endozoochory by herbivores. Functional Ecology, 16(3): 296-304	"A number of species classified as having no specific dispersal mechanism (Grime et al. 1988) germinated in high numbers from the dung (Table 4). These were mainly species of low stature such as Cerastium fontanum, Poa annua, Sagina procumbens and Stellaria media." [Seeds of Cerastium fontanum germinated from rabbit and sheep dung]
	Mouissie, A., Van Der Veen, C. E., Veen, G. C., & Van Diggelen, R. (2005). Ecological correlates of seed survival after ingestion by fallow deer. Functional Ecology, 19(2): 284-290	"On average, passage of 50% of total seed recovery (t0·5) took 24·9 h and ranged between 13·3 h for the fastest species, Cerastium fontanum, and 38·4 h for the slowest species, P. major" ... "Almost all species fed to the Fallow Deer germinated from the dung."
	Kuiters, A. T., & Huiskes, H. P. J. (2010). Potential of endozoochorous seed dispersal by sheep in calcareous grasslands: correlations with seed traits. Applied Vegetation Science, 13(2): 163-172	"Table 2. List of species that germinated from the sheep dung samples (n524) collected at five calcareous grassland sites in the Netherlands between Sep 2005 and Nov 2007." [Includes seeds of Cerastium fontanum]

801	**Prolific seed production (>1000/m2)**	**y**
	Source(s)	**Notes**
	Williams, E. D. (1984). Changes during 3 years in the size and composition of the seed bank beneath a long-term pasture as influenced by defoliation and fertilizer regime. Journal of Applied Ecology, 21(2): 603-615.	"A 3-year study was conducted of the changes in the size and composition of the seed bank beneath an Agrostis-Festuca pasture, resulting from regular or infrequent defoliation and moderate fertilizer applications." ... "TABLE 6. Estimate of the number of viable seeds m-2 shed during haymaking on the infrequently cut plots during June and July 1978" [Seed densities of Cerastiumfontanum ssp glabrescens range from 565 to 19 121 m-2]

802	**Evidence that a persistent propagule bank is formed (>1 yr)**	**y**

Qsn #	Question	Answer
	Source(s)	**Notes**
	Thompson, K. B. S. R., Band, S. R., & Hodgson, J. G. (1993). Seed size and shape predict persistence in soil. Functional Ecology, 7: 236-241	[At least 5 years] "Table 1. Diaspore weight, variance of three diaspore dimensions (transformed so that longest dimension is unity) and persistence in the soil for 44 species of seeds and 53 species of fruits." [Cerastium fontanum - (p) species with diaspores which persist in the soil for at least 5 years]

803	Well controlled by herbicides	y
	Source(s)	**Notes**
	WSU Hortsense. (2014). Weeds: Mouseear chickweed (Cerastium fontanum ssp. vulgare). Washington State University, Pullman, Washington. http://hortsense.cahnrs.wsu.edu/. [Accessed 6 Nov 2015]	"Chemical Management" ... "Glyphosate products should be applied as spot treatments only!" [Recommended herbicides include glyphosate, dichlobenil, oryzalin for Landscape Areas, products containing MCPP & triclopyr for Turf Areas, & glyphosate & triclopyr for Bare Ground Areas]
	Alaska Natural Heritage Program. (2011). common mouse-ear chickweed - Cerastium fontanum ssp. vulgare (Hartman) Greuter & Burdet. sticky chickweed - Cerastium glomeratum Thuill. University of Alaska, Anchorage. http://aknhp.uaa.alaska.edu. [Accessed 4 Nov 2015]	"Herbicides can be effective when applied during active growth (AKEPIC 2010)."
	Marshall, J., Brown, V., Boatman, N., Lutman, P., & Squire, G. (2001). The impact of herbicides on weed abundance and biodiversity. Defra PN0940. A report for the UK Pesticides Safety Directorate. Bristol: IACR Long Ashton Research Station	Cerastium fontanum susceptible to some herbicides & resistant to others

804	Tolerates, or benefits from, mutilation, cultivation, or fire	n
	Source(s)	**Notes**
	Alaska Natural Heritage Program. (2011). common mouse-ear chickweed - Cerastium fontanum ssp. vulgare (Hartman) Greuter & Burdet. sticky chickweed - Cerastium glomeratum Thuill. University of Alaska, Anchorage. http://aknhp.uaa.alaska.edu. [Accessed 4 Nov 2015]	"These weeds thrive in lawns and gardens but do not tolerate cultivation (Ohio perennial and biennial weed guide 2006)." ... "Small populations of common mouse-ear chickweed and sticky chickweed can be controlled by hand-pulling."

805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	
	Source(s)	**Notes**
	Wagner, W.L., Herbst, D.R.& Sohmer, S.H. 1999. Manual of the flowering plants of Hawaii. Revised edition. University of Hawai‘i Press and Bishop Museum Press, Honolulu, HI.	[Unlikely] "in Hawai'i naturalized in usually wet to sometimes dry, disturbed habitats, 0-3,900 m, on all of the main islands except Ni'ihau and Kaho'olawe."

Summary of Risk Traits:

High Risk / Undesirable Traits
• Elevation range exceeds 3000+ m, demonstrating environmental versatility
• Naturalized & able to grow in tropical climates
• Widely naturalized, including all main Hawaiian Islands
• A weed of lawns, roadsides, pastures, open woodlands & wastelands
• Other Cerastium species have become weeds
• Tolerates many soil types
• Reproduces by seed & by creeping stems that root from the stem joints
• Hybridizes with other Cerastium species
• Capable of self-pollination
• Able to reach maturity in one growing season
• Seeds dispersed by wind, as a produce contaminant, & both externally & internally by birds & other animals
• Prolific seed production
• Seeds may form a persistent seed bank

Low Risk Traits
• Despite widespread naturalization & reports of weediness, impacts are generally unspecified or not considered to be significant in natural communities
• Unarmed (no spines, thorns or burrs)
• Palatable to browsing & grazing animals
• Non-toxic
• Effectively controlled by herbicides
• Effectively controlled by hand-pulling & cultivation