Taxon: Scandix pecten-veneris L.

Family: Apiaceae

Common Name(s): shepherd's needle
Venus's comb

Synonym(s): Chaerophyllum pecten-veneris (L.) Crantz
Myrrhis pecten-veneris (L.) All.
Selinum pecten-veneris (L.) E.H.L.Krause
Wylia pecten-veneris (L.) Bubani

Assessor: Chuck Chimera **Status:** Approved **End Date:** 14 Jul 2025

WRA Score: 10.0 **Designation:** H(HPWRA) **Rating:** High Risk

Keywords: Annual Herb, Crop Weed, Edible, Self-Fertile, Epizoochorous

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)	High
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		
303	Agricultural/forestry/horticultural weed	y = 2*multiplier (see Appendix 2), n = 0	y
304	Environmental weed	y = 2*multiplier (see Appendix 2), n = 0	n
305	Congeneric weed		
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
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	y = 1, n = 0	n

Qsn #	Question	Answer Option	Answer
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		
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	n
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)	y = 1, n = -1	y
702	Propagules dispersed intentionally by people	y = 1, n = -1	y
703	Propagules likely to disperse as a produce contaminant	y = 1, n = -1	y
704	Propagules adapted to wind dispersal	y = 1, n = -1	n
705	Propagules water dispersed		
706	Propagules bird dispersed	y = 1, n = -1	n
707	Propagules dispersed by other animals (externally)	y = 1, n = -1	y
708	Propagules survive passage through the gut		
801	Prolific seed production (>1000/m2)		
802	Evidence that a persistent propagule bank is formed (>1 yr)	y = 1, n = -1	n
803	Well controlled by herbicides	y = -1, n = 1	y
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
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**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"The consumption of wild plants such as S. pecten-veneris in Greece has been documented for more than two thousand years. Scandix is mentioned as a pot-herb by Theophrastus and Pliny, and Dioscorides describes the greens as being eaten raw or cooked. Euripides's mother was supposed to have sold wild chervil on the Athenian market. The wild plants that our ancestors used to collect (there are reports by Theophrastus, and by Dioscorides) and use in separate dishes are present even today in meals, mostly in villages (Dalby, 2003; Psaroudaki et al., 2012)." [While it is sold in local markets and has a long culinary tradition, especially in countries like Greece and Turkey, it is collected from the wild rather than being systematically cultivated]

102	**Has the species become naturalized where grown?**	
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	NA

103	**Does the species have weedy races?**	
	Source(s)	**Notes**
	WRA Specialist. (2025). 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"**	**High**
	Source(s)	**Notes**
	USDA, Agricultural Research Service, National Plant Germplasm System. (2025). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch. [Accessed 10 Jul 2025]	"Native Africa MACARONESIA: Spain [Canarias], Portugal [Madeira Islands] NORTHERN AFRICA: Algeria (n.), Egypt (n.), Libya (n.), Morocco, Tunisia Asia-Temperate WESTERN ASIA: Afghanistan, Cyprus, Iran, Iraq, Israel, Jordan, Lebanon, Syria, Turkey CAUCASUS: Armenia, Azerbaijan, Russian Federation [Dagestan] MIDDLE ASIA: Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan Asia-Tropical INDIAN SUBCONTINENT: India [Himachal Pradesh, Jammu and Kashmir], Pakistan Europe NORTHERN EUROPE: Denmark, United Kingdom, Ireland, Sweden MIDDLE EUROPE: Austria, Belgium, Switzerland, Czech Republic, Germany, Hungary, Netherlands, Poland, Slovakia EASTERN EUROPE: Ukraine (incl. Krym) SOUTHEASTERN EUROPE: Albania, Bulgaria, Bosnia and Herzegovina, Greece (incl. Crete), Croatia, Italy (incl. Sicily), North Macedonia, Montenegro, Romania, Serbia, Slovenia SOUTHWESTERN EUROPE: Spain (incl. Baleares), France (incl. Corsica), Portugal"

Qsn #	Question	Answer
202	**Quality of climate match data**	**High**
	Source(s)	**Notes**
	USDA, Agricultural Research Service, National Plant Germplasm System. (2025). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch. [Accessed 10 Jul 2025]	"Native Africa MACARONESIA: Spain [Canarias], Portugal [Madeira Islands] NORTHERN AFRICA: Algeria (n.), Egypt (n.), Libya (n.), Morocco, Tunisia Asia-Temperate WESTERN ASIA: Afghanistan, Cyprus, Iran, Iraq, Israel, Jordan, Lebanon, Syria, Turkey CAUCASUS: Armenia, Azerbaijan, Russian Federation [Dagestan] MIDDLE ASIA: Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan Asia-Tropical INDIAN SUBCONTINENT: India [Himachal Pradesh, Jammu and Kashmir], Pakistan Europe NORTHERN EUROPE: Denmark, United Kingdom, Ireland, Sweden MIDDLE EUROPE: Austria, Belgium, Switzerland, Czech Republic, Germany, Hungary, Netherlands, Poland, Slovakia EASTERN EUROPE: Ukraine (incl. Krym) SOUTHEASTERN EUROPE: Albania, Bulgaria, Bosnia and Herzegovina, Greece (incl. Crete), Croatia, Italy (incl. Sicily), North Macedonia, Montenegro, Romania, Serbia, Slovenia SOUTHWESTERN EUROPE: Spain (incl. Baleares), France (incl. Corsica), Portugal"

203	**Broad climate suitability (environmental versatility)**	**y**
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"Climate - It is a plant which thrives in hot, dry summers and winters with variously alternating snowy, wet, fine, warm and cold periods (Turrill, 1918)."
	Missouri Botanical Garden. (2025). Scandix pecten-veneris L. Flora of Pakistan. Tropicos. http://legacy.tropicos.org/Name/1700220?projectid=32. [Accessed 10 Jul 2025]	"Venus's Comb is a very common species from the plains to 2000 m during the spring season." [Broad elevation range]

204	**Native or naturalized in regions with tropical or subtropical climates**	**y**
	Source(s)	**Notes**

Qsn #	Question	Answer
	USDA, Agricultural Research Service, National Plant Germplasm System. (2025). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch. [Accessed 11 Jul 2025]	"Native Africa MACARONESIA: Spain [Canarias], Portugal [Madeira Islands] NORTHERN AFRICA: Algeria (n.), Egypt (n.), Libya (n.), Morocco, Tunisia Asia-Temperate WESTERN ASIA: Afghanistan, Cyprus, Iran, Iraq, Israel, Jordan, Lebanon, Syria, Turkey CAUCASUS: Armenia, Azerbaijan, Russian Federation [Dagestan] MIDDLE ASIA: Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan Asia-Tropical INDIAN SUBCONTINENT: India [Himachal Pradesh, Jammu and Kashmir], Pakistan Europe NORTHERN EUROPE: Denmark, United Kingdom, Ireland, Sweden MIDDLE EUROPE: Austria, Belgium, Switzerland, Czech Republic, Germany, Hungary, Netherlands, Poland, Slovakia EASTERN EUROPE: Ukraine (incl. Krym) SOUTHEASTERN EUROPE: Albania, Bulgaria, Bosnia and Herzegovina, Greece (incl. Crete), Croatia, Italy (incl. Sicily), North Macedonia, Montenegro, Romania, Serbia, Slovenia SOUTHWESTERN EUROPE: Spain (incl. Baleares), France (incl. Corsica), Portugal Naturalized (widely natzd.)"
	WRA Specialist. (2025). Personal Communication	While Scandix pecten-veneris is native to temperate Eurasia, it has adapted to some subtropical and Mediterranean climates, particularly in Australia, New Zealand, the southern U.S., and parts of South America. However, it is less common in purely tropical regions.

205	Does the species have a history of repeated introductions outside its natural range?	y
	Source(s)	**Notes**
	POWO (2025). Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet; https://powo.science.kew.org/. [Accessed 11 Jul 2025]	"Introduced into: Alabama, Argentina Northeast, Arizona, British Columbia, California, Chile Central, District of Columbia, Florida, Georgia, Great Britain, Ireland, Japan, Korea, Massachusetts, Michigan, New Jersey, New South Wales, New York, New Zealand North, New Zealand South, North Carolina, Ohio, Ontario, Oregon, Pennsylvania, Rhode I., Saskatchewan, South Australia, South Carolina, South Dakota, Tasmania, Tennessee, Texas, Victoria, Washington "
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"The distribution of S. pecten-veneris in Europe is centred on the Mediterranean, extending north to Denmark and westwards to Great Britain, introduced into North and South America, North and South Africa and Australasia (Forbes, 2003; Allen and Hatfield, 2004), while the range of S. pecten-veneris beyond Europe extends to North Africa and from South-East Asia to the borders of India (Stewart et al., l994)."

301	Naturalized beyond native range	y
	Source(s)	**Notes**
	Kwan, C. (2025). Consultant. Pers. Comm. 16 April	"Here's another one that I'm not finding listed anywhere: Scandex pecten-veneris. And the photo that my PlantNet app used to come up with it: It's growing in a hostile environment – a construction yard at Honolulu Community College. Extremely dry." [Reported as present on Oahu, as identified by PlantNet]

USDA, Agricultural Research Service, National Plant Germplasm System. (2025). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch. [Accessed 11 Jul 2025]	"Naturalized (widely natzd.)"
Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Scandix pecten-veneris L. Apiaceae Synonym/s (n° of refs): Scandix pectenveneris L. subsp. pecten-veneris (4) Total N° of Refs: 145 Global Risk Score: 10.8 Rating: Medium Habit: annual Herb Preferred Climate/s: Dryland, Mediterranean, Subtropical, Tropical Origin: Africa, E Asia, Europe Major Pathway/s: Contaminant, Crop, Herbal, Ornamental Dispersed by: Humans, Animals, Livestock Seed Longevity: Present Weed of: Canola, Carrots, Cereals, Grapevines, Lupins, Orchards & Plantations, Pastures, Pome Fruits, Vegetables References: Egypt-W-221, United States of America-W-34, Finland-U-42, Global-A-44, Chile-N-300, Global-W-108, Global-NZW-85, Europe-A-94, Global-A-243, United States of America-N-101, New Zealand-UW-280, western Asia-A-115, Chile-N-241, United States of America-W-161, Australia-N-176, Japan-N-287, western Europe-A-253, Australia-N-198, Europe, eastern-W-272, western Europe-W-70, United States of America-W-218, Australia-N-945, Spain-A-417, Canary Islands-N-305, United Kingdom-N-519, France-A-665, Italy-A-667, Morocco-A-686, Italy-A-687, Denmark-N-711, India-A-712, Canada and United States of America-N-725, Turkey-A-727, United States of America-E-736, Global-W-743, Chile-N-765, Japan-N-794, United Kingdom-NZ-812, Australia-W-853, Australia-W-869, Europe-A-889, Spain-A-892, India-N-914, New Zealand-U-919, Chile-A-931, United Kingdom-Z-944, United States of America-W-946, Turkey-A-977, Australia-N-354, Czechoslovakia-N-1006, Denmark-N-1006, Germany-N-1006, United Kingdom-N-1006, Norway-N-1006, Slovakia-N-1006, Australia-N-1049, Europe-N-819, Turkey-A-144, United Kingdom-A-1093, Poland-A-1219, Crete-A-1228, Chile-N-1229, Serbia-W-1238, Greece-W-1240, Norway-N-1243, Georgia-NR-1250, France-A-1266, Japan-N-1278, Macedonia-A-1304, Global-W-1324, Chile-N-1348, Global-W-1349, India-N-1389, Turkey--1412, Turkey-A-1469, Slovakia-N-1484, Czech Republic-U-1522, Iran-A-1524, Estonia-W-1609, Denmark-W-1609, Russia-W-1609, Norway-W-1609, Poland-W-1609, Sweden-W-1609, United Kingdom-N-1636, Greece-A-87, Tunisia-A-87, United Kingdom-A-87, Iran-A-87, Israel-A-87, Lebanon-A-87, Morocco-A-87, Portugal-A-87, Spain-A-87, Chile-A-87, New Zealand-A-87, Turkey-A-87, United States of America-A-87, Serbia-A-1019, Global-ZD-1611, Italy-A-1618, Iran-A-1619, Ukraine-N-1685, Pakistan-A-1728, North Africa, Libya, Egypt-W-1730, Czech Republic-U-1731, Morocco-A-1751, Morocco-A-1752, France-A-1814, Australia-N-1845, Montenegro-W-1861, Chile-I-1872, France-A-1924, Australia-N-1959, Estonia-N-1997, Kosovo-R-2003, Tunisia-A-2006, Iran-A-1812, Italy-A-2043, New Zealand-U-2048, Global-W-2056, Iran-A-2072, Iran-A-2075, Italy-A-2081, Spain-A-2083, Greece-A-2093, Turkey-A-2101, Australia-W-1977, Belarus-W-1977, Canada-W-1977, Chile-W-1977, Czech Republic-W-1977, Ireland-W-1977, Japan-W-1977, Norway-W-1977, Poland-W-1977, Republic of Korea-W-1977, Slovakia-W-1977, Sweden-W-1977, United Kingdom-W-1977, South Korea-U-2113."
Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"The distribution of S. pecten-veneris in Europe is centred on the Mediterranean, extending north to Denmark and westwards to Great Britain, introduced into North and South America, North and South Africa and Australasia (Forbes, 2003; Allen and Hatfield, 2004), while the range of S. pecten-veneris beyond Europe extends to North Africa and from South-East Asia to the borders of India (Stewart et al., l994)."

Qsn #	Question	Answer
302	Garden/amenity/disturbance weed	
	Source(s)	Notes
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris inhabits arable fields, wasteland and coastal sites subject to disturbance. It is found in dry, sunny, most frequently on heavy calcareous clay loam soils." [Impacts, if any, are typically identified in agricultural settings]
303	Agricultural/forestry/horticultural weed	y
	Source(s)	Notes
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is a species of arable land and waste places, associated with arable cultivation and is extremely abundant in grain fields. Shepherd's needle found in arable crops is annual, able to grow and set seed in the time between the sowing of the crop and post-harvest cultivation. However, S. pecten-veneris that has shorter-lived seeds has declined. S. pecten-veneris is dependent on the arable ecosystem, which is characterized by regular soil cultivation (Wilson, 1993). It is listed as a threatened or even extinct weed species in Northern and Central Europe (Pinke et al., 2011; Pal et al., 2013), but much more frequent in the Southern European study area, which can be regarded as its original (core) area. Shepherd's needle declined markedly during the past century (Sutcliffe and Kay, 2000; Godefroid, 2001), and especially from the mid 1950s (Stewart et al., 1994). Romero et al. (2008) compared weed vegetation occurring in conventional and in organically managed farms in Spain. They documented that S. pecten-veneris can be found in big frequency only in organic fields and it was concentrated in the crop edges. Cirujeda et al. (2011) observed that it is a very rare species, found in quite intensive dryland cereal fields."
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Weed of: Canola, Carrots, Cereals, Grapevines, Lupins, Orchards & Plantations, Pastures, Pome Fruits, Vegetables"
	WRA Specialist. (2025). Personal Communication	Scandix pecten-veneris is an occasional or minor weed of crops, especially cereal fields in Europe and pastures or disturbed fields in North America and Australia. It is more often considered part of the traditional arable weed flora, and in some areas, it's now in decline due to modern agriculture rather than being a current major pest.
304	Environmental weed	n
	Source(s)	Notes
	White, M., Cheal, D., Carr, G. W., Adair, R., Blood, K. and Meagher, D. (2018). Advisory list of environmental weeds in Victoria. Arthur Rylah Institute for Environmental Research Technical Report Series No. 287. Department of Environment, Land, Water and Planning, Heidelberg, Victoria	"Advisory list of environmental weeds in Victoria (abridged version April 2018)" [Scandix pecten-veneris is listed as having "Currently insignificant" impacts on natural systems]
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Weed of: Canola, Carrots, Cereals, Grapevines, Lupins, Orchards & Plantations, Pastures, Pome Fruits, Vegetables"

Qsn #	Question	Answer
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	[Crop weed] "S. pecten-veneris is a species of arable land and waste places, associated with arable cultivation and is extremely abundant in grain fields. Shepherd's needle found in arable crops is annual, able to grow and set seed in the time between the sowing of the crop and post-harvest cultivation. However, S. pecten-veneris that has shorter-lived seeds has declined. S. pecten-veneris is dependent on the arable ecosystem, which is characterized by regular soil cultivation (Wilson, 1993). It is listed as a threatened or even extinct weed species in Northern and Central Europe (Pinke et al., 2011; Pal et al., 2013), but much more frequent in the Southern European study area, which can be regarded as its original (core) area. Shepherd's needle declined markedly during the past century (Sutcliffe and Kay, 2000; Godefroid, 2001), and especially from the mid 1950s (Stewart et al., 1994). Romero et al. (2008) compared weed vegetation occurring in conventional and in organically managed farms in Spain. They documented that S. pecten-veneris can be found in big frequency only in organic fields and it was concentrated in the crop edges. Cirujeda et al. (2011) observed that it is a very rare species, found in quite intensive dryland cereal fields."
	CABI. (2025). CABI Compendium Invasive Species. https://www.cabidigitallibrary.org/product/qi. [Accessed 14 Jul 2025]	No evidence

305	Congeneric weed	
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Scandix iberica ... Weed of: Cereals" ... "Scandix stellata ... Weed of: Cereals"
	WRA Specialist. (2025). Personal Communication	While no Scandix species are widely recognized as serious invasive weeds in the global sense (e.g., on national noxious weed lists), a few—like Scandix australis, Scandix iberica and Scandix stellata—are regarded as naturalized, weedy, or casual aliens in some regions, particularly in disturbed or anthropogenic habitats

401	Produces spines, thorns or burrs	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is an erect branched annual, growing in height, which develops a bare stem, creating a thick crown up to 50 cm (Storkey et al., 2010)." [No evidence]

402	Allelopathic	n
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	To date, no published peer-reviewed studies indicate that Scandix pecten-veneris exhibits allelopathic behavior. All available research focuses on its non-chemical interactions with crops or its medicinal/biochemical profiles, rather than allelochemical effects.

403	Parasitic	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is an erect branched annual, growing in height, which develops a bare stem, creating a thick crown up to 50 cm"

Qsn #	Question	Answer
404	Unpalatable to grazing animals	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is an edible wild green leafy vegetable in the Mediterranean diet and a species of arable land and waste places. It was used as food and then as medicine." [No evidence of consumption by animals]
	Haq, A., & Badshah, L. (2023). Palatability status and animals' preferences of forage plants in Pashat Valley, Pak-Afghan border, District Bajaur, Pakistan. Ethnobotany Research and Applications, 26, 1-22	"Table 3. Palatable flora of Pashat Valley, Bajaur" [Scandix pecten-veneris - Animal preference = Goat, sheep]

405	Toxic to animals	n
	Source(s)	**Notes**
	Useful Temperate Plants Database, Ken Fern. (2025). Scandix pecten-veneris. https://temperate.theferns.info/plant/Scandix+pecten-veneris. [Accessed 14 Jul 2025]	"Known Hazards None known"
	Haq, A., & Badshah, L. (2023). Palatability status and animals' preferences of forage plants in Pashat Valley, Pak-Afghan border, District Bajaur, Pakistan. Ethnobotany Research and Applications, 26, 1-22	No evidence. A study in Pashat Valley, Pakistan, evaluated forage plants and categorized Scandix pecten-veneris as moderately palatable to grazing animals like goats and sheep. The plant was consumed fresh, indicating its acceptability as forage

406	Host for recognized pests and pathogens	
	Source(s)	**Notes**

Qsn #	Question	Answer
	Botanikks. (2025). Scandix Pecten-veneris L. - Shepherds needle. https://www.botanikks.com/plants/scandix-pecten-veneris-l/505230/1. [Accessed 14 Jul 2025]	"Disease and Pest Management for Scandix pecten-veneris L. Scandix pecten-veneris L., commonly referred to as the Venus's comb or shepherd's needle, is an herbaceous plant that produces small white flowers resembling those of Queen Anne's lace. Like any other plant, it is vulnerable to diseases and pests that can negatively affect its growth and productivity. Here are the common diseases and pests that may affect Scandix pecten-veneris L. and ways to manage them effectively. Common Diseases - Root Rot - This is a fungal disease that affects the root system, leading to rotting and eventual death of the plant. It thrives in wet and poorly drained soils. To manage this disease, it is essential to plant Scandix pecten-veneris L. in well-draining soils and avoid over-watering. Also, apply fungicides to the soil in case of an infection. Mildew - Powdery mildew is a fungal disease that affects the leaves and stem of the plant, producing white patches on the surface. This disease thrives in humid and warm conditions. Applying fungicides and ensuring proper air circulation around the plant can help to manage this disease. Blights - Various blights affect Scandix pecten-veneris L., including Alternaria and Septoria blights. These diseases cause spots on the leaves, stem, and flowers, leading to defoliation and eventual death of the plant. To manage blights, remove infected leaves and apply fungicides to reduce the spread of the disease. Common Pests Aphids - These are small insects that suck sap from the plant, leading to stunted growth and eventual death. They are a common pest in Scandix pecten-veneris L. and can be managed by using insecticides and introducing natural predators such as ladybugs to the garden. Spider mites - These are tiny pests that thrive in dry and dusty conditions, preferring to feed on the underside of the leaves. They cause the leaves to turn yellow and eventually drop. To manage spider mites infestation in Scandix pecten-veneris L., spray insecticidal soap solution or neem oil on the leaves, or wash them off with water. Caterpillars - The caterpillars of various moths and butterflies feed on the leaves and stems of Scandix pecten-veneris L., causing severe damage to the plant. Handpicking and destroying the caterpillars or using Bacillus thuringiensis (BT) insecticide can help to manage the infestation. Overall, maintaining good plant hygiene, proper cultural practices, and early detection of diseases and pests are crucial in managing these challenges in Scandix pecten-veneris L."
	WRA Specialist. (2025). Personal Communication	Not typically known as a host for major pests or pathogens. However, it can be affected by common plant issues

Qsn #	Question	Answer
407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	**Notes**
	Useful Temperate Plants Database, Ken Fern. (2025). Scandix pecten-veneris. https://temperate.theferns.info/plant/Scandix+pecten-veneris. [Accessed 14 Jul 2025]	"Known Hazards None known"
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is an edible wild green leafy vegetable in the Mediterranean diet and a species of arable land and waste places. It was used as food and then as medicine." [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
	WRA Specialist. (2025). Personal Communication	Scandix pecten-veneris is generally safe for human consumption and handling, with no evidence of toxicity or allergenic properties in current literature.

408	Creates a fire hazard in natural ecosystems	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris inhabits arable fields, wasteland and coastal sites subject to disturbance. It is found in dry, sunny, most frequently on heavy calcareous clay loam soils. It cannot grow in the shade and it requires moist soil." [There is no information that it accumulates large amounts of dry flammable material, or that its essential oils (tridecane, pentadecane, β-caryophyllene) contribute to a fire hazard]

409	Is a shade tolerant plant at some stage of its life cycle	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"It cannot grow in the shade and it requires moist soil."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is a species which grows in arable land and waste places and prospers in sandy, loam, clay soils." ... "It prefers all soils except chalk, though it can be occasionally seen on chalky loam soil and may also be planted growing freely on lime soil on calcareous rock soils (Brenchley, 1913; Horwood, 1919)."

411	Climbing or smothering growth habit	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is an erect branched annual, growing in height, which develops a bare stem, creating a thick crown up to 50 cm"

412	Forms dense thickets	n

Qsn #	Question	Answer
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is an edible wild green leafy vegetable in the Mediterranean diet and a species of arable land and waste places. It was used as food and then as medicine. The consumption of wild plants as Shepherd's needle in Greece has been documented for more than two thousand years; Scandix is mentioned as a pot-herb by Theophrastus and Pliny, and Dioscorides. It is an erect branched annual, growing in height, and develops a bare stem, creating a thick crown up to 50 cm. This plant is grown from seeds mainly in autumn and early winter, although a few seeds germinate in the spring in cultivated fields."
	WRA Specialist. (2025). Personal Communication	As a relatively small annual herb (up to 50 cm tall), there is no information indicating Scandix pecten-veneris forms dense thickets that obstruct passage or exclude other species in a problematic manner

501	Aquatic	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	[Terrestrial] "S. pecten-veneris inhabits arable fields, wasteland and coastal sites subject to disturbance. It is found in dry, sunny, most frequently on heavy calcareous clay loam soils. It cannot grow in the shade and it requires moist soil. It has suffered a severe decline in Central Europe due to large agricultural intensification and the low level of the plants' seed dormancy."

502	Grass	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	Apiaceae

503	Nitrogen fixing woody plant	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is an archaeophyte, native of Eurasia, a dicot, an annual scapose herb belonging to the family Apiaceae (Umbelliferae) (Plunkett et al., 1996; Terpó et al., 1999; Eskin et al., 2012; Kougioumoutzis et al., 2012)."

504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris has a white, small tapering root with slender, secondary rootlets. Its root oil has anylisobutyrate (42.8%) as its main component (Kubeczka, 1982)."

601	Evidence of substantial reproductive failure in native habitat	n
	Source(s)	**Notes**

Qsn #	Question	Answer
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"The distribution of S. pecten-veneris in Europe is centred on the Mediterranean, extending north to Denmark and westwards to Great Britain, introduced into North and South America, North and South Africa and Australasia (Forbes, 2003; Allen and Hatfield, 2004), while the range of S. pecten-veneris beyond Europe extends to North Africa and from South-East Asia to the borders of India (Stewart et al., l994)."

602	Produces viable seed	y
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"Available information for propagation of S. pecten-veneris is conspicuously lacking. It can be propagated only through seeds. S. pecten-veneris seeds are sowed in autumn to early winter and in spring at a 0.5cm depth. The seed germination percentage in potting soil at a temperature of 15oC in the greenhouse was 94%, while at 18oC it was higher (97%). At 15oC in the greenhouse a reduction of the germination percentage in all concentrations of 40, 60 and 80 mM of NaCl was shown at 84-80% and at 18oC at 93-92% respectively."

603	Hybridizes naturally	
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	While Scandix pecten-veneris is sympatric with other Scandix species like S. iberica and S. verna in the Levant, and their populations sometimes mix, there is no explicit documented evidence of natural interspecific hybridization in the provided sources.

604	Self-compatible or apomictic	y
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"The plant is self-fertile. (Horwood, 1919; Koul and Bhargava, 1983; Cohen, 2004)."

605	Requires specialist pollinators	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"The flowers may be male and hermaphrodite and are pollinated by insects. The plant is self-fertile. (Horwood, 1919; Koul and Bhargava, 1983; Cohen, 2004)."
	WRA Specialist. (2025). Personal Communication	The plant is "self-fertile", meaning it does not obligately depend on a pollinator for sexual reproduction. While its flowers are "pollinated by insects," this does not imply a requirement for specialist pollinators.

606	Reproduction by vegetative fragmentation	n
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"It can be propagated only through seeds. S. pecten-veneris seeds are sowed in autumn to early winter and in spring at a 0.5cm depth."

607	Minimum generative time (years)	1

Qsn #	Question	Answer
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"Shepherd's needle found in arable crops is annual, able to grow and set seed in the time between the sowing of the crop and post-harvest cultivation."

701	**Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)**	**y**
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Dispersed by: Humans, Animals, Livestock"
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is a species of arable land and waste places, associated with arable cultivation and is extremely abundant in grain fields." ... "The fruit is rough, flattened on one side, finely furrowed on the other, with hairy edges and it consists of two seeds which remain joined until ripe." [Hairs could aid in external attachment, and presence in arable lands suggests movement is facilitated by human activity]
	BASF. (2025). Shepherd's Needle [Scandix pecten-veneris]. https://www.agricentre.basf.co.uk/en/Services/Pest-Guide/Weeds/Broadleaf-weeds/Shepherd's-Needle/. [Accessed 14 Jul 2025]	"Seeds are dispersed mechanically from the parent plant and can also hook onto hair or clothing."
	Carlquist, S., & Pauly, Q. (1985). Experimental studies on epizoochorous dispersal in Californian plants. Aliso, 11(2), 167-177	"The retrorse nature of bristles enhanced diaspore attachment and hindered release from the pile. Scandix pecten-veneris and Bromus commutatus penetrate less efficiently, as reflected in their low adhesion rates." [Possibly, but less adhesive than other externally dispersed diaspores]

702	**Propagules dispersed intentionally by people**	**y**
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Contaminant, Crop, Herbal, Ornamental Dispersed by: Humans, Animals, Livestock"
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"This plant is grown from seeds mainly in autumn and early winter, although a few seeds germinate in the spring in cultivated fields. S. pecten-veneris is sold widely around the Mediterranean and is present in every weekly vegetable market. The selling of Shepherd's needle has a long, continuous tradition."

703	**Propagules likely to disperse as a produce contaminant**	**y**
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"Cirujeda et al. (2011) observed that it is a very rare species, found in quite intensive dryland cereal fields."
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Major Pathway/s: Contaminant, Crop, Herbal, Ornamental Dispersed by: Humans, Animals, Livestock"

704	**Propagules adapted to wind dispersal**	**n**
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Dispersed by: Humans, Animals, Livestock"

Qsn #	Question	Answer
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"The fruit is rough, flattened on one side, finely furrowed on the other, with hairy edges and it consists of two seeds which remain joined until ripe. The fruits can reach up to 6 cm in length and are long, narrow and pointed. Seeds. The seed has a long scabrid needle-like appendage up to 6cm in length, which acts as a spring dispersal mechanism as the seed ripens (Schneider et al., 1994)." [No morphological features or documented evidence of significant wind dispersal.]

705	Propagules water dispersed	
	Source(s)	Notes
	WRA Specialist. (2025). Personal Communication	Unknown. There is no information regarding the buoyancy of its propagules.

706	Propagules bird dispersed	n
	Source(s)	Notes
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"The fruit is rough, flattened on one side, finely furrowed on the other, with hairy edges and it consists of two seeds which remain joined until ripe. The fruits can reach up to 6 cm in length and are long, narrow and pointed. Seeds. The seed has a long scabrid needle-like appendage up to 6cm in length, which acts as a spring dispersal mechanism as the seed ripens (Schneider et al., 1994)." [Not fleshy-fruited or adapted for bird dispersal]
	WRA Specialist. (2025). Personal Communication	Its animal dispersal mechanism is external attachment, and there are no documented reports of bird dispersal, nor does it have fleshy fruits indicative of internal bird dispersal.

707	Propagules dispersed by other animals (externally)	y
	Source(s)	Notes
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	"Dispersed by: Humans, Animals, Livestock"
	Carlquist, S., & Pauly, Q. (1985). Experimental studies on epizoochorous dispersal in Californian plants. Aliso, 11(2), 167-177	"This group is composed of Bromus commutatus, B. diandrus, B. rubens, Hordeum glaucum, Osmorhiza chilensis, and Scandix pecten-veneris. All these species except Osmorhiza chilensis have diaspores heavier at the peduncle end, with the bristles directed away from that end. This characteristic may account for the high adherence of these species on the artificial fur (Table 2). As the diaspores were dropped onto the artificial fur, the heavier end reached the substrate first, entering the pile. The retrorse nature of bristles enhanced diaspore attachment and hindered release from the pile. Scandix pecten-veneris and Bromus commutatus penetrate less efficiently, as reflected in their low adhesion rates."

708	Propagules survive passage through the gut	
	Source(s)	Notes
	WRA Specialist. (2025). Personal Communication	Unknown. While edible, there is no information that its propagules are consumed by animals and remain viable after gut passage. Its dispersal likely relies more on epizoochory or abiotic factors.

801	Prolific seed production (>1000/m2)	

Qsn #	Question	Answer
	Source(s)	**Notes**
	Souipas, S. (2014). Characteristics of biology, morphology, competitive ability, control methods and precision agriculture of the weed shepherd needle (Scandix pecten-veneris). Doctoral dissertation, University of Thessaly	"Seeds produced by a plant were 1363±185. Light seeds (8-15 mg) had almost double germination-emergence percentage (80-95%) compared with that (35-65%) of heavy seeds (35-53 mg)."
	Ammar, L., Harizia, A., & Righi, K. (2023). Weed seed bank dynamics during a three year crop rotation in Mediterranean semi-arid region (Northwestern Algeria). Acta fytotechn zootechn, 26, 2023(3): 314-323	"Table 6 Weed seed density (m-2) in soil seed banks according to study season and soil depth" [Scandix pecten veneris L. = 254.76 m-2 at a depth of 15-30]
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"The optimum germination depth is 0.5 cm, while the seed number per plant ranged from 50-150."

802	Evidence that a persistent propagule bank is formed (>1 yr)	n
	Source(s)	**Notes**
	BASF. (2025). Shepherd's Needle [Scandix pecten-veneris]. https://www.agricentre.basf.co.uk/en/Services/Pest-Guide/Weeds/Broadleaf-weeds/Shepherd's-Needle/. [Accessed 14 Jul 2025]	"Seed longevity: <1 year"
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"The low seed dormancy of S. pecten-veneris (Thompson et al., 1993) leads to a faster depletion of the seed bank by repeated herbicide applications (Storkey et al., 2010)."

803	Well controlled by herbicides	y
	Source(s)	**Notes**
	Liopa-Tsakalidi, A. (2014). 'Scandix pecten-veneris' L.: A wild green leafy vegetable. Australian Journal of Crop Science, 8(1), 103-108	"S. pecten-veneris is a simulated species because it was once widespread and often abundant in the lowlands of Great Britain, but has declined considerably due to the introduction of chemical herbicides and fertilizers and the destruction of field margin habitats (Berry et al., 2001; 2002)."
	BASF. (2025). Shepherd's Needle [Scandix pecten-veneris]. https://www.agricentre.basf.co.uk/en/Services/Pest-Guide/Weeds/Broadleaf-weeds/Shepherd's-Needle/. [Accessed 14 Jul 2025]	"The reappearance of shepherd's-needle in cereals may be due to the reduction in the use of 2, 4-D and MCPA at high doses, but combinations of sulfonylureas with contact herbicides and hormones can be effective."
	WRA Specialist. (2025). Personal Communication	ts growth has declined considerably due to the introduction of chemical herbicides and fertilizers. Its low seed dormancy leads to a faster depletion of the seed bank by repeated herbicide applications. This demonstrates that it is effectively controlled by herbicides.

804	Tolerates, or benefits from, mutilation, cultivation, or fire	
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	While dependent on the arable ecosystem (with cultivation), its decline is linked to the intensification of agricultural management practices, including cultivation and herbicide application. This indicates it is negatively impacted rather than benefiting from these disturbances in a way that enhances its weediness. There is no evidence of tolerance or benefit from mutilation or fire.

Qsn #	Question	Answer
805	**Effective natural enemies present locally (e.g. introduced biocontrol agents)**	
	Source(s)	**Notes**
	WRA Specialist. (2025). Personal Communication	Unknown

Summary of Risk Traits:

Scandix pecten-veneris, or shepherd's-needle, is a fast-growing annual herb in the carrot family (Apiaceae), native to Europe, North Africa, and western Asia. It grows up to 50 cm tall and is known for its fine, feathery leaves and long, slender seed pods that resemble needles—an adaptation for clinging to fur, fabric, or equipment.

This plant has a long history as a wild edible in the Mediterranean, where its young leaves are eaten raw or cooked. It reproduces only by seeds and can produce over 1,000 seeds per plant, although its seeds do not remain viable for more than a year. It spreads primarily through human activity and surface attachment to animals.

Shepherd's-needle has naturalized in several regions outside its native range, including North America, Australia, and possibly on the island of O'ahu. It grows in disturbed sites and agricultural areas, where it can act as a minor weed of cereal crops and pastures. While not toxic, it is moderately palatable to livestock like goats and sheep. In Hawai'i, it has been identified as a high-risk species due to its adaptability and potential to spread in disturbed landscapes.

High Risk / Undesirable Traits
Broad elevation range and climate suitability
Can grow in temperate, Mediterranean, and subtropical climates
Naturalized in several regions outside its native range, including North America, Australia, and possibly on the island of O'ahu
A disturbance adapted crop weed
Tolerates many soil types (not limited by substrate)
Reproduces by seeds only
Self-fertile
Annual (reaches maturity in one growing season)
Seeds dispersed externally by attachment to animals, and through accidental and intentional human activities (cultivation and seed contamination)
Capable of prolific seed production (possibly more than 1000 m-2)

Low Risk Traits
Unarmed (no spines, thorns, or burs)
Palatable to animals and people
Not reported to be toxic
Cannot grow in shade
Herbicides may provide effective control