

Family: *Poaceae*

Taxon: *Digitaria abyssinica*

Synonym: *Digitaria scalarum* (Schweinf.) Chiov.
Digitaria vestita Fig. & De Not.
Panicum scalarum Schweinf.
Syntherisma abyssinicum (Hochst. ex A. Rich.

Common Name: Abyssinian finger grass
African couch grass

Questionnaire :	current 20090513	Assessor:	Chuck Chimera	Designation: H(HPWRA)
Status:	Assessor Approved	Data Entry Person:	Chuck Chimera	WRA Score 16
101	Is the species highly domesticated?		y=-3, n=0	n
102	Has the species become naturalized where grown?		y=1, n=-1	
103	Does the species have weedy races?		y=1, n=-1	
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	n
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)	
303	Agricultural/forestry/horticultural weed		n=0, y = 2*multiplier (see Appendix 2)	y
304	Environmental weed		n=0, y = 2*multiplier (see Appendix 2)	
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	
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		y=1, n=0	
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	y
409	Is a shade tolerant plant at some stage of its life cycle		y=1, n=0	y

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	y
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	y
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	
604	Self-compatible or apomictic	y=1, n=-1	
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	
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	
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	y=1, n=-1	n
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	
801	Prolific seed production (>1000/m ²)	y=1, n=-1	y
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	y=1, n=-1	y
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)	y=-1, n=1	

Designation: H(HPWRA)

WRA Score 16

Supporting Data:

101	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Is the species highly domesticated?? No] No evidence
101	2012. CAB International. Invasive species compendium [online encyclopedia] - Digitaria abyssinica (East African couchgrass). http://www.cabi.org/isc/?compid=5&dsid=18917&oadmodule=datasheet&page=481&site=144	[Is the species highly domesticated?? No] "Until a revision of the genus in East Africa by Clayton and Renvoize (1982), <i>D. abyssinica</i> was known as <i>D. scalarum</i> . <i>Digitaria</i> is derived from the Latin <i>digitus</i> , finger, a reference to the racemes in the inflorescence; <i>abyssinicus</i> means 'of Africa'."
102	2012. WRA Specialist. Personal Communication.	NA
103	2012. WRA Specialist. Personal Communication.	NA
201	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Species suited to tropical or subtropical climate(s) 2-High] "African Couchgrass may be found from sealevel up to 3000 m and is known in Uganda as "Lumbugu" and in Kenya as "Thangari"...It is most common in both Zone II and III, as a constituent of natural grassland at the higher altitudes (> 1500 m) but especially as a weed in arable and plantation agriculture or even as a ruderal plant (Clayton & Renvoize, 1982)."
201	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Species suited to tropical or subtropical climate(s) 2-High] "Tropical Africa, Ethiopia, Gabon, Tanzania, Nigeria, South Africa, Uganda, Zimbabwe, Kenya, Sri Lanka, Arabia."
202	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Quality of climate match data 2-High] "African Couchgrass may be found from sealevel up to 3000 m and is known in Uganda as "Lumbugu" and in Kenya as "Thangari"...It is most common in both Zone II and III, as a constituent of natural grassland at the higher altitudes (> 1500 m) but especially as a weed in arable and plantation agriculture or even as a ruderal plant (Clayton & Renvoize, 1982)."
203	1990. Skerman, P.J. Fernando Riveros. Tropical grasses. Food & Agriculture Org., Rome, Italy	[Broad climate suitability (environmental versatility)? Yes] "This grass is widely distributed in the moister regions of East Africa from sea-level to 3500 m, and is the most important of the rhizomatous grass weeds." [Broad elevation range]
203	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Broad climate suitability (environmental versatility)? Yes] "African Couchgrass may be found from sealevel up to 3000 m..." [Elevation range exceeds 1000 m, demonstrating environmental versatility]
204	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Native or naturalized in regions with tropical or subtropical climates? Yes] "African Couchgrass may be found from sealevel up to 3000 m and is known in Uganda as "Lumbugu" and in Kenya as "Thangari"...It is most common in both Zone II and III, as a constituent of natural grassland at the higher altitudes (> 1500 m) but especially as a weed in arable and plantation agriculture or even as a ruderal plant (Clayton & Renvoize, 1982)."
204	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Native or naturalized in regions with tropical or subtropical climates? Yes] "Tropical Africa, Ethiopia, Gabon, Tanzania, Nigeria, South Africa, Uganda, Zimbabwe, Kenya, Sri Lanka, Arabia."
205	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Does the species have a history of repeated introductions outside its natural range? No] No evidence
301	1998. Herbst, D.R.. Notes on the grasses of Hawai'i: New Records, Corrections, and Name Changes. Bishop Museum Occasional Papers. 55: 17-38.	[Naturalized beyond native range? Yes] " <i>Digitaria abyssinica</i> (A. Rich.) Stapf New state record. The collections of <i>Digitaria abyssinica</i> listed below document a new state record. Collections of the plant were made from experimental grass plots on O'ahu and Maui in 1940 and 1943, respectively, but at that time it was not known to be naturalized in Hawai'i. It is an African species. Material examined. KAUAI: Kalaheo, 29 Aug 1946, Au, s.n. (BISH 448776); MAUI: Olinda, Forestry House, 3850 ft, Mar 1979, Hobby 434 (BISH)."
302	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Garden/amenity/disturbance weed? A disturbance weed impacting agriculture. See 3.03] "It appears wherever soil is disturbed or where vegetation is burnt. The more the soil is disturbed, short of eliminating the grass itself, the more vigorous it grows."

303	1977. Holm, L.G./Plucknett, D.L./Pancho, J.V./Herberger, J.P.. The world's worst weeds: distribution and biology. East-West Center, University Press of Hawaii, Honolulu, HI	[Agricultural/forestry/horticultural weed? Yes] "It is most troublesome in the crops of Ethiopia, Kenya, Tanzania, and Uganda. <i>D. scalarum</i> [syn: <i>D. abyssinica</i>] is said to be the number-one weed in coffee in Kenya and cotton in Uganda. It is a serious weed of coffee in Ethiopia, cotton and sisal in Kenya, and sugarcane in Tanzania. It is also a problem weed in tea, pineapple, pyrethrum, forest nurseries, flax, and wheat in these areas. The growth and yield of crop plants is greatly reduced where the weed occurs. Coffee plants may be completely killed by severe infestation."
303	1997. Sileshi, G.. Potential biocontrol agents for the blue couch grass, <i>Digitaria abyssinica</i> (A. Rich.) Stapf., in East Africa. International Journal of Pest Management. 43:2: 173-176.	[Agricultural/forestry/horticultural weed? Yes] "The blue couch grass, <i>Digitaria abyssinica</i> (A.Rich.) Stapf, is the most troublesome of all East African weeds (Ivens, 1971). It is the most important weed in Ethiopia (Stroud and Parker, 1989) and Kenya (Michieka, 1991) occurring in a wide range of crops. In Ethiopia, it has been the major weed antagonist of coffee (Paulos, 1985), maize and sorghum (Rezene, 1985a), root and tuber crops (Etagegnehu and Ahmed, 1985) and tef (<i>Eragrostis tef</i> Zucc.) (Birhanu, 1985). Growth and yield of crop plants are greatly reduced where the weed occurs and coffee bushes can be killed by a severe infestation (Ivens, 1971). The problem in tef and coffee is more serious because the weed is hard to remove by the usual methods of hand-weeding and slashing. In coffee, slashing did not give complete control since it encouraged both development of swards of grass (Acland, 1971) and spread of the pathogenic fungus <i>Gibberella xylophiloides</i> (Booth and Waterston, 1964). Most herbicides did not give satisfactory control (Birhanu, 1985), some showed phytotoxicity (Rezene, 1985b) and some were harmful to beneficial insects (Messersmith and Adkins, 1995)."
303	2000. Tamado, T./Milberg, P.. Weed flora in arable fields of eastern of eastern Ethiopia with emphasis on the occurrence of <i>Parthenium hysterophorus</i> . Weed Research. 40: 507-521.	[Agricultural/forestry/horticultural weed? Yes] "When asked to list important weed species in their area, farmers in our survey mentioned only 15 species in total. Ninety per cent of the interviewed farmers in the lowlands ranked <i>P. hysterophorus</i> as the most important weed while 86% of the farmers in the highlands ranked <i>Digitaria abyssinica</i> highest"
303	2001. Kabanyoro, R.. Responses of the weed <i>Digitaria abyssinica</i> (A. Rich.) Stapf to selective grass herbicides in Ugandan cotton. PhD Dissertation. University of Newcastle, Newcastle, UK	[Agricultural/forestry/horticultural weed? Yes] " <i>D. abyssinica</i> is widely distributed in the moisture regions of East Africa from sea level to 3000 m. It is a common component of the natural grasslands at higher altitudes. <i>D. abyssinica</i> . It is the most troublesome weed which occurs in a range of crops such as coffee, tea, sisal, pyrethrum, cotton and many other annual and perennial crops in Kenya, Tanzania and Uganda and it is also present in Ethiopia, Malawi, Somalia, Sudan and Zambia (Terry and Michieka, 1987)." ... "With a heavy infestation of <i>D. abyssinica</i> , both growth and yield of crop plants are tremendously reduced (Ivens, 1967 and Mbevi, 1997). It is regarded as the most troublesome weed of arable land in some parts of East Africa (Otieno, 1967)."
303	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Agricultural/forestry/horticultural weed? Yes] "a troublesome weed of many crops..."
304	2010. USDA-APHIS. Federal Noxious Weed List. http://www.aphis.usda.gov/plant_health/plant_pests_info/weeds/downloads/weedlist.pdf	[Environmental weed? Primarily an agricultural weed] "A1 Weeds: Federal noxious weeds, not in US" [Includes <i>Digitaria abyssinica</i> . Considered a weed of agriculture] [No person may move a Federal noxious weed into or through the United States, or interstate, unless: (a) He or she applies for a permit to move a noxious weed in accordance with §360.301; (b) The permit application is approved; and (c) The movement is consistent with the specific conditions contained in the permit. (Approved by the Office of Management and Budget under control number 0579-0054) [75 FR 68954, Nov. 10, 2010]
305	2012. CAB International. Invasive species compendium [online encyclopedia] - <i>Digitaria abyssinica</i> (East African couchgrass). http://www.cabi.org/isc/?compid=5&dsid=18917&loadmodule=datasheet&page=481&site=144	[Congeneric weed? Yes] "In East Africa, where <i>D. abyssinica</i> is most important as a weed, 50 species of <i>Digitaria</i> are recognized (Clayton and Renvoize, 1982). The perennial habit of <i>D. abyssinica</i> distinguishes it from annual weeds such as <i>D. ciliaris</i> , <i>D. leptorrhachis</i> , <i>D. nuda</i> , <i>D. sanguinalis</i> and <i>D. velutina</i> . There are three perennial species of <i>Digitaria</i> in the East African region which have been described as weeds: <i>D. gazensis</i> is tufted and has hairy spikelets; <i>D. milanjiana</i> has 2-18 digitate, or almost digitate, racemes; <i>D. pearsonii</i> , a straggling perennial with wiry rhizomes, is intermediate between <i>D. velutina</i> and <i>D. abyssinica</i> and is often confused with these two species. The spikelets of <i>D. pearsonii</i> are slightly pubescent and the fruits are characteristically golden or mahogany brown. In the vegetative stage, <i>D. abyssinica</i> might be confused with <i>Cynodon dactylon</i> , but in the latter the ligule is a fringe of hairs and the leaves are 2-3 per node instead of just one."

401	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Produces spines, thorns or burrs? No] "Perennial, erect and decumbent, weak, trailing, creeping at base, mat-forming, ruderal, rhizomatous with wiry slender long rhizomes, roots fibrous, culms branched, leaf blade flat and bluish green, basal sheaths glabrous, ligule membranous, leaves linear to lanceolate, solitary or whorled racemes on a short axis, spikelets glabrous and paired, upper glume and lower lemma glabrous, lower glume a membranous scale..."
402	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Allelopathic? Unknown] [No evidence of allelopathy reported]
403	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Parasitic? No] No evidence [Poaceae]
404	1977. Holm, L.G./Plucknett, D.L./Pancho, J.V./Herberger, J.P.. The world's worst weeds: distribution and biology. East-West Center, University Press of Hawaii, Honolulu, HI	[Unpalatable to grazing animals? No] "Even though it is palatable for cattle when young, it is not a productive enough grass to use for grazing." [Syn: Digitaria scalarum]
404	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Unpalatable to grazing animals? No] "Fortunately, African Couchgrass is nutritious (Dougall & Bogdan, 1960), well liked by livestock and loses vigour under grazing. It then remains close to the ground. Grazing can weaken it to a point that a timely and good ploughing in the dry season can finish it off."
404	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Unpalatable to grazing animals? No] "...fairly palatable when young, nutritious..."
405	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Toxic to animals? No] "...fairly palatable when young, nutritious..." [No evidence]
406	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Host for recognized pests and pathogens? Unknown] Not listed among the adverse impacts of this grass
406	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Host for recognized pests and pathogens? Unknown] Not listed among the adverse impacts of this grass
407	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Causes allergies or is otherwise toxic to humans? No] No evidence. Not listed among the adverse impacts of this grass
407	2012. Specialized Information Services, U.S. National Library of Medicine. TOXNET toxicology data network [online database]. National Institutes of Health, http://toxnet.nlm.nih.gov/	[Causes allergies or is otherwise toxic to humans? No] No evidence
408	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Creates a fire hazard in natural ecosystems? Probably Yes] "it is a grass which will be the first to emerge when litter or crop debris are burnt in the field. If left unchecked, the grass is hard to control by one simple mechanical operation."
408	1995. Baguma, S.D./Webb, M./Osiru, D.S.O.. Control of Digitaria abyssinica (A. Rich) Stapf. with glyphosate. African Crop Science Journal. 3(4): 495-504.	[Creates a fire hazard in natural ecosystems? Probably yes] "There was no advantage of burning compared to slashing in terms of the degree of D. abyssinica control obtained. By increasing nutrient loss and by creating the risk of fire damage, burning is the least acceptable of the three options assessed, though in practice, it is often used by Ugandan farmers in vegetation management."
408	2001. Kabanyoro, R.. Responses of the weed Digitaria abyssinica (A. Rich.) Stapf to selective grass herbicides in Ugandan cotton. PhD Dissertation. University of Newcastle, Newcastle, UK	[Creates a fire hazard in natural ecosystems? Yes] "D. abyssinica produces long and slender rhizomes, forming a dense mat beneath the soil surface. Its rhizomes can penetrate to a depth greater than one metre." [Fire risk would increase if grass established in such high densities]
409	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Is a shade tolerant plant at some stage of its life cycle? Yes] "found in moist shady places and roadsides, mountains, along streams..."

409	2012. CAB International. Invasive species compendium [online encyclopedia] - <i>Digitaria abyssinica</i> (East African couchgrass). http://www.cabi.org/isc/?compid=5&dsid=18917&oadmodule=datasheet&page=481&site=144	[Is a shade tolerant plant at some stage of its life cycle? Yes. Tolerates shade but prefers full sun] "D. abyssinica grows best under high light intensity and is more troublesome in unshaded than shaded plantations (Popay and Ivens, 1982)."
410	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)? Yes] "found in moist shady places and roadsides, mountains, along streams, rich soils and cultivated land, sandy loam, slopes, dry soils and muddy soils, disturbed ground, riverbanks, in clumps on bare roadside bank, clearings, rocky roadside, grassland and wetland, forest edge, abandoned fields, gardens..."
411	2012. CAB International. Invasive species compendium [online encyclopedia] - <i>Digitaria abyssinica</i> (East African couchgrass). http://www.cabi.org/isc/?compid=5&dsid=18917&oadmodule=datasheet&page=481&site=144	[Climbing or smothering growth habit? No. Forms dense mats. See 4.12] "Mature stands of this weed can have a leaf area index of 3, approximately the same as a fully grown maize crop (Duthie, 1957, reporting paper by AN Prentice). <i>D. abyssinica</i> forms a dense mat of rhizomes penetrating the soil to considerable depths, reputedly 60 cm or more, with densities of 220 m of rhizome/m ² (Duthie, 1957). It produces a whole plant fresh weight biomass of 36 44 tonnes/ha (Richardson, 1967). Lateral buds on the rhizome lose their dormancy when cultivation or natural processes break the rhizome, causing loss of apical dominance. Rhizome fragments have been reported not to emerge when buried to 16 cm (Mshiu, 1978). This may have some practical significance for control."
412	2001. Kabanyoro, R.. Responses of the weed <i>Digitaria abyssinica</i> (A. Rich.) Stapf to selective grass herbicides in Ugandan cotton. PhD Dissertation. University of Newcastle, Newcastle, UK	[Forms dense thickets? Yes] "It has been planted in the Cape of Good Hope Peninsula where it forms a thick turf on the mountain slopes (Huxley and Turk, 1966)." ... "D. abyssinica produces long and slender rhizomes, forming a dense mat beneath the soil surface. Its rhizomes can penetrate to a depth greater than one metre."
501	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Aquatic? No] Terrestrial
502	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Grass? Yes] "Perennial, erect and decumbent, weak, trailing, creeping at base, mat-forming, ruderal, rhizomatous with wiry slender long rhizomes, roots fibrous, culms branched, leaf blade flat and bluish green, basal sheaths glabrous, ligule membranous, leaves linear to lanceolate, solitary or whorled racemes on a short axis, spikelets glabrous and paired, upper glume and lower lemma glabrous, lower glume a membranous scale..."
503	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Nitrogen fixing woody plant? No] Poaceae
504	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)? No] "Perennial, erect and decumbent, weak, trailing, creeping at base, mat-forming, ruderal, rhizomatous with wiry slender long rhizomes, roots fibrous, culms branched..." [Not a geophyte, but can resprout from rhizomes]
601	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Evidence of substantial reproductive failure in native habitat? No] No evidence
602	2012. CAB International. Invasive species compendium [online encyclopedia] - <i>Digitaria abyssinica</i> (East African couchgrass). http://www.cabi.org/isc/?compid=5&dsid=18917&oadmodule=datasheet&page=481&site=144	[Produces viable seed? Yes] "D. abyssinica seeds profusely; Harker (1957) found seed production of 78 kg/ha in Uganda; equivalent to 26,000 seeds/m ² . Germination potential varies considerably; up to 7% germination has been found in seed samples 3 5 weeks old, but this increased to 78% in 18 month-old seed (Harker, 1957). Seeds are, therefore, presumed to be important in the propagation and spread of <i>D. abyssinica</i> , however, this is a poorly researched topic. Bogdan (1965) found that 6% of wheat samples in Kenya contained seeds of <i>D. abyssinica</i> ."
603	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Hybridizes naturally? Unknown] No evidence
603	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Hybridizes naturally? Unknown] No evidence

604	1980. Lemen, C.. Allocation of Reproductive Effort to the Male and Female Strategies in Wind-Pollinated Plants. <i>Oecologia</i> . 45: 156–159.	[Self-compatible or apomictic? Unknown] "Other species used here are <i>Lolium perenne</i> (L.), <i>Digitaria saguinalis</i> (L.), <i>Setaria geniculata</i> (Lam.), <i>Lepidium virginicum</i> (L.). The first species, <i>L. perenne</i> , is wind pollinated and self-incompatible, the rest are wind-pollinated self-compatible." [Unknown for <i>D. abyssinica</i> , but other <i>Digitaria</i> species are self-compatible]
605	1994. Zomlefer, W.B.. Guide to Flowering Plant Families. The University of North Carolina Press, Chapel Hill & London	[Requires specialist pollinators? NO] Poaceae [anemophilous. Wind-pollinated]
606	2001. Kabanyoro, R.. Responses of the weed <i>Digitaria abyssinica</i> (A. Rich.) Stapf to selective grass herbicides in Ugandan cotton. PhD Dissertation. University of Newcastle, Newcastle, UK	[Reproduction by vegetative fragmentation? Yes] " <i>D. abyssinica</i> produces long and slender rhizomes, forming a dense mat beneath the soil surface. Its rhizomes can penetrate to a depth greater than one metre. The rhizomes are made of short nodes and short internodes, with the roots rising from the nodes. Any small fragment of a rhizome with a node is capable of producing a new plant once left in the ground (Harker, 1957)."
607	2001. Kabanyoro, R.. Responses of the weed <i>Digitaria abyssinica</i> (A. Rich.) Stapf to selective grass herbicides in Ugandan cotton. PhD Dissertation. University of Newcastle, Newcastle, UK	[Minimum generative time (years)? Unknown] " <i>D. abyssinica</i> produces long and slender rhizomes, forming a dense mat beneath the soil surface. Its rhizomes can penetrate to a depth greater than one metre. The rhizomes are made of short nodes and short internodes, with the roots rising from the nodes. Any small fragment of a rhizome with a node is capable of producing a new plant once left in the ground (Harker, 1957)."
607	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Minimum generative time (years)? Unknown] "Perennial, erect and decumbent, weak, trailing, creeping at base, mat-forming, ruderal, rhizomatous with wiry slender long rhizomes..."
701	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)? Yes] "found in moist shady places and roadsides, mountains, along streams, rich soils and cultivated land, sandy loam, slopes, dry soils and muddy soils, disturbed ground, riverbanks, in clumps on bare roadside bank, clearings, rocky roadside, grassland and wetland, forest edge, abandoned fields, gardens..." [Adaptation to disturbed habitats & frequent occurrence on roadsides suggests that this grass would be inadvertently dispersed along high traffic corridors]
702	2001. Hanelt, P. (ed.). Mansfeld's encyclopedia of agricultural & horticultural crops: (except ornamentals). Algae, Fungi, Pteridophyta, Gymnospermae, Angiospermae - Dicotyledones: Magnoliaceae - Chrysobalanaceae Vol. 1. Springer-Verlag, Berlin, Heidelberg	[Propagules dispersed intentionally by people? Yes in South Africa] "In South Africa planted for erosion control although it is regarded the most troublesome of all African weeds."
702	2010. USDA-APHIS. Federal Noxious Weed List. http://www.aphis.usda.gov/plant_health/plant_pests_info/weeds/downloads/weedlist.pdf	[Propagules dispersed intentionally by people? No Evidence] "A1 Weeds: Federal noxious weeds, not in US" [Includes <i>Digitaria abyssinica</i> . No person may move a Federal noxious weed into or through the United States, or interstate, unless: (a) He or she applies for a permit to move a noxious weed in accordance with §360.301; (b) The permit application is approved; and (c) The movement is consistent with the specific conditions contained in the permit. (Approved by the Office of Management and Budget under control number 0579–0054) [75 FR 68954, Nov. 10, 2010]
703	2012. CAB International. Invasive species compendium [online encyclopedia] - <i>Digitaria abyssinica</i> (East African couchgrass). http://www.cabi.org/isc/?compid=5&dsid=18917&oadmodule=datasheet&page=481&site=144	[Propagules likely to disperse as a produce contaminant? Ys] "Bogdan (1965) found that 6% of wheat samples in Kenya contained seeds of <i>D. abyssinica</i> ."
704	2000. Harvey, C.A.. Windbreaks Enhance Seed Dispersal into Agricultural Landscapes in Monteverde, Costa Rica. <i>Ecological Applications</i> . 10(1): 155-173.	[Propagules adapted to wind dispersal? Yes] "Appendix. <i>Digitaria abyssinica</i> ... Dispersal Mode: G = Gravity. W = Wind"
705	2000. Harvey, C.A.. Windbreaks Enhance Seed Dispersal into Agricultural Landscapes in Monteverde, Costa Rica. <i>Ecological Applications</i> . 10(1): 155-173.	[Propagules water dispersed? No] "Appendix. <i>Digitaria abyssinica</i> ... Dispersal Mode: G = Gravity. W = Wind"
705	2006. Quattrocchi, U.. CRC World Dictionary of Grasses: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. Volume I. CRC Press, Boca Raton, FL	[Propagules water dispersed? No] "found in moist shady places and roadsides, mountains, along streams..." [May be moved by water along streams, but adapted for wind and gravity dispersal]

706	2000. Harvey, C.A.. Windbreaks Enhance Seed Dispersal into Agricultural Landscapes in Monteverde, Costa Rica. <i>Ecological Applications</i> . 10(1): 155-173.	[Propagules bird dispersed? No] "Appendix. <i>Digitaria abyssinica</i> ... Dispersal Mode: G = Gravity. W = Wind"
707	2010. Scher, J.L./Walters, D.S.. Federal noxious weed disseminules of the U.S.. California Department of Food and Agriculture, and Center for Plant Health Science and Technology, USDA, APHIS, PPQ,	[Propagules dispersed by other animals (externally)? No] "Spikelets of 1 fertile floret and 1 basal sterile lemma. Spikelets ovate-elliptic, dorsally compressed, plano-convex, 1.5–2.5 mm long, 0.8–1 mm wide, completely glabrous. Pedicel segment often persistent. Glumes 2, dissimilar; lower glume absent or reduced, hyaline; upper glume membranous, slightly shorter than to as long as spikelet. Sterile lemma similar in appearance to upper glume, as long as spikelet. Fertile floret brown at maturity, fertile lemma cartilaginous, shorter than to as long as spikelet, with flat margins enclosing much of palea, faintly muricate" [No obvious means of external attachment]
708	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Propagules survive passage through the gut? Unknown] "Fortunately, African Couchgrass is nutritious (Dougall & Bogdan, 1960), well liked by livestock and loses vigour under grazing. It then remains close to the ground. Grazing can weaken it to a point that a timely and good ploughing in the dry season can finish it off." [Consumption by animals could potentially spread viable seeds or rhizome fragments]
801	1977. Holm, L.G./Plucknett, D.L./Pancho, J.V./Herberger, J.P.. The world's worst weeds: distribution and biology. East-West Center, University Press of Hawaii, Honolulu, HI	[Prolific seed production (>1000/m ²)? Yes] Seeding was so prolific that an average of 26,000 seeds per square m was produced."
802	2009. Kassahun, A./Snyman, H.A./Smit, G.N.. Soil seed bank evaluation along a degradation gradient in arid rangelands of the Somali region, eastern Ethiopia. <i>Agriculture, Ecosystems and Environment</i> . 129: 428–436.	[Evidence that a persistent propagule bank is formed (>1 yr)? No] " <i>C. rotundus</i> was absent in the field but present in the soil seed bank, whereas <i>Sorghum abyssinica</i> and <i>Digitaria abyssinica</i> were common in the field but absent in the Asbuli grassland soil seed bank." ... On the other hand, species such as <i>D. abyssinica</i> , <i>D. eratha</i> , <i>S. abyssinica</i> , <i>C. albicaulis</i> and <i>O. basilicum</i> , which were well represented aboveground, were absent in the seed bank. These results are consistent with other studies on rangeland seed banks (Major and Pyott, 1966; Thompson and Grime, 1979; Thompson, 1986; Thompson et al., 1997)."
803	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Well controlled by herbicides? Yes] "African Couchgrass is controlled effectively with Dalapon (Veenstra & Boonman, 1974) and now that prices of Glyphosate have come down, the latter herbicide should be equally effective, if not more, since it also copes with the many dicotyle weeds commonly found in Couchgrass communities. Dalapon should be applied when the grass is growing actively, not more than 5 kg/ha should be applied since higher rates "burn" the foliage before the herbicide is transported to the roots."
803	1995. Baguma, S.D./Webb, M./Osiru, D.S.O.. Control of <i>Digitaria abyssinica</i> (A. Rich) Stapf. with glyphosate. <i>African Crop Science Journal</i> . 3(4): 495-504.	[Well controlled by herbicides? Yes] "Investigations were conducted in Uganda on the effect of glyphosate dose rate, timing of application, and the combination of glyphosate with cultural methods for the control of <i>Digitaria abyssinica</i> (A. Rich) Stapf. Results showed a dose rate of 1.5 kg a.e.ha ⁻¹ to be optimum. Application with pre plant tillage did not increase <i>D. abyssinica</i> control, but increased populations of other weeds and costs. Glyphosate efficacy was increased when preceded by slashing, burning or digging. At least one month was required between the cultural pre-treatments and spraying to allow new shoots to emerge. Glyphosate was most effective when applied to <i>D. abyssinica</i> shoots up to eight weeks after emergence. The optimum timing for spraying was between one and two months after cultural pre-treatment. Glyphosate applications considerably reduced labour requirement for preparation of <i>D. abyssinica</i> infested land."

803	2001. Kabanyoro, R.. Responses of the weed <i>Digitaria abyssinica</i> (A. Rich.) Stapf to selective grass herbicides in Ugandan cotton. PhD Dissertation. University of Newcastles, Newcastle, UK	[Well controlled by herbicides? Yes] "Field trials were conducted on the sandy loam/loam soils at Namulonge Research Institute and Bukalasa Technology Verification Centre in Uganda during the 1995/96 and 1997/98 cotton seasons to investigate the control of the tropical couch grass (<i>Digitaria abyssinica</i> (A. Rich.) Stapf) using the post emergence herbicides." ... "This weed is a rhizomatous grass and difficult to control. The efficacy of the reduced dose rates of the grass selective post emergence herbicides sethoxydim and fluzafop-butyl was investigated for the control of <i>D. abyssinica</i> and other grass weed species in cotton so as to determine the appropriate dose rate(s). The herbicides were supplemented with two hand weedings. Hand weeding (5 times) during the growing season was included in the treatments. The results obtained from the field trials showed the potential of reduced dose rates in the control of grasses. The application of fluzafop-butyl (138,162 and 188 g a. i. ha 1) and sethoxydim (405,502 and 579 g a. i. ha 1) gave a significant density reduction of <i>D. abyssinica</i> and other annual grasses at 35 days after herbicide application. No significant differences were observed amongst the dose rates of both herbicides in the percentage weed control of <i>D. abyssinica</i> and other grass weed species in the two seasons. The percentage weed control ranged between 79-96%. The assessment showed that fresh and dry weights of <i>D. abyssinica</i> shoots/foilage were reduced by 70-80% irrespective of the dose rates for both herbicides at the two sites during the two seasons. Reduced dose rates below half of the full dose rates were investigated in the greenhouse in UK. A markedly reduction of <i>D. abyssinica</i> shoots and rhizomes was noted following the application of fluzafop butyl (38,66,94,188 g a. i. ha 1) and sethoxydim (116,203, 290,579 g a. i. ha 1) compared to the control. An average percentage reduction of 43.2- 62% for fresh and dry shoots, and 65.9-78% for fresh and dry rhizomes was observed. Although analysis of variance indicated that there were no significant differences amongst dose rates, low percentage reduction was noted from the lowest dose rate of fluzafopbutyl (38 g a. i. ha 1)." ... "Once established <i>Digitaria</i> rhizomes penetrate throughout the soil, including the middle of the root system of the crop plants. Hence it becomes difficult to remove them without the use of herbicides."
803	2012. CAB International. Invasive species compendium [online encyclopedia] - <i>Digitaria abyssinica</i> (East African couchgrass). http://www.cabi.org/isc/?compid=5&dsid=18917&oadmodule=datasheet&page=481&site=144	[Well controlled by herbicides? Yes] "Herbicides that have been tested and used against <i>D. abyssinica</i> include alloxymid, amitrole, asulam, butylate, dalapon, glufosinate-ammonium, glyphosate, haloxyfop, hexazinone, metribuzin, MSMA, sethoxydim, sulfosate (glyphosate-trimesium) and TCA - sodium. Dalapon was a standard treatment to young foliage (Ivens, 1989) but this has largely been superseded by glyphosate (Terry, 1974; Baguma et al., 1995)."
804	1993. Boonman, J.G.. East Africa's grasses and fodders: their ecology and husbandry. Kluwer Academic Publishers, Dordrecht, The Netherlands	[Tolerates, or benefits from, mutilation, cultivation, or fire? Yes] "Although one of the most pernicious arable weeds, it is an effective soil protector due to its rhizomatous habits which make it also resistant to fire; it is a grass which will be the first to emerge when litter or crop debris are burnt in the field. If left unchecked, the grass is hard to control by one simple mechanical operation."
805	1997. Sileshi, G.. Potential biocontrol agents for the blue couch grass, <i>Digitaria abyssinica</i> (A. Rich.) Stapf., in East Africa. International Journal of Pest Management. 43:2: 173-176.	[Effective natural enemies present locally (e.g. introduced biocontrol agents)? Unknown for Hawaiian Islands] "Abstract. Studies were carried out in 1992 ± 1996 with the objective of identifying potential biocontrol agents for the weed <i>Digitaria abyssinica</i> . Seven muscid shoot-flies (<i>Atherigona</i> spp.), four chloropid flies, two chrysomelid beetles, one pseudococcid bug and one rust fungus were found to be associated with the weed. Among these, <i>Atherigona</i> species were the most important control agents. Three of the <i>Atherigona</i> species attacked non-crop plants and caused up to 77% shoot damage to the weed. <i>Atherigona</i> were active throughout the year, but damage to the weed was more severe during the rainy season. <i>Atherigona</i> species were also strongly attracted to meat meal and when this material was applied, attack by the flies increased dramatically."