

NOTEWORTHY COLLECTION

CALIFORNIA

*TRIFOLIUM SUFFOCATUM* L. (FABACEAE) (suffocated clover).—Monterey Co., along 180 m of incompletely vegetated use trail on old sand dunes of former Fort Ord, in chaparral, with *Matricaria discoidea* DC, *Lepidium strictum* (S. Watson) Rattan, *Triphysaria pusilla* (Benth.) T. I. Chuang & Heckard, *Hypochaeris glabra* L., *Trifolium angustifolium* L., *Spergula arvensis* L., *Cardionema ramosissimum* (Weinm.) A. Nelson & J. F. Macbr., *Plantago coronopus* L., *Silene gallica* L., *Logfia gallica* Coss. & Germ., *Aira caryophyllea* L., *Bromus diandrus* Roth, and *B. hordeaceus* L., UTM: 10S 0606738E, 4055848N, elev. 82 m, 3 May 2010, *Styer 37318* (CDA), identified by Randall Morgan and confirmed by Michael Vincent; Monterey Pines Golf Course, UTM: 10S 0601813E, 4050118N, elev. 34 m, 28 June 2012, and UTM: 10S 0601573E, 4050001N, with 40–50 plants, all past bloom and withered, in incompletely vegetated, unplanted “lawn” on old sand dunes, with *Aira caryophyllea*, *Plantago coronopus*, *Lasthenia minor* (DC.) Ornduff, *Medicago polymorpha* L., *Trifolium tomentosum* L., *Cotula australis* (Sreng.) Hook. f., *Silene gallica*, *Piperia yadonii* Rand. Morgan & Ackerman, *Festuca bromoides* L., *Bromus diandrus*, *B. hordeaceus*, *Hypochaeris glabra*, and *H. radicata* L., elev. 36 m, 5 July 2012, *D. & J. Styer 37467* (CDA).

*Collection notes.* Plant densely caespitose, apparently without stems, ca. 5–10 cm diameter; inflorescence without peduncle, of many minute green calyces clustered in center of plant; and flowers cleistogamous. With respect to the key in Vincent and Isley (2012), this could be placed at the beginning of Group 2, and it would separate *T. suffocatum* from all others in the group. It is the only CA clover with neither stem nor peduncle.

A population of apparently several hundred plants of this species was first noted by Morgan at the Monterey Pines Golf Course on 17 April 1999, with *Lasthenia minor*, growing as a weed on irrigated, mowed lawn just inside the golf course. The clover was in vegetative condition at the time, but he removed a small clump of

turf containing several plants, grew them out to maturity, and identified them as *T. suffocatum* from Zohary and Heller (1984). It is worth noting that 13 years later the population is still extant on the golf course grounds.

*Significance.* This is the first report of *T. suffocatum* for North America. According to Zohary and Heller (1984), this native of Europe and the Mediterranean grows in “grazed places and roadsides.” An account of *T. suffocatum* in the British Isles may be found in the Online Atlas of the British & Irish Flora (2012). It is naturalized in the golf course, and it is likely naturalized on the former Fort Ord. During the late 1800’s, the golf course was a resort. The gardener, Rudolf Ulrich, brought plants from all over the world. Even after the Navy acquired the property, it was never used for military purposes. Both areas have been subject to much human traffic from local areas and abroad. *T. suffocatum* has not been noted in the local horticultural trade.

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LITERATURE CITED

ONLINE ATLAS OF THE BRITISH & IRISH FLORA. 2012. *Trifolium suffocatum* (suffocated clover). Website: <http://www.brc.ac.uk/plantatlas/index.php?q=plant/trifolium-suffocatum> [accessed 01 September 2012].  
VINCENT, M. A. AND D. ISELY. 2012. *Trifolium*. Pp. 789–798 in B. G. Baldwin, D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken (eds.), *The Jepson manual: vascular plants of California*, 2nd ed. University of California Press, Berkeley, CA.  
ZOHARY, M. AND D. HELLER. 1984. *The Genus Trifolium*. Israel Academy of Sciences and Humanities, Jerusalem, Israel.



Styer, David and Morgan, Randall. 2013. "California." *Madroño; a West American journal of botany* 60, 260–260.

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