

Specimens of primocane and voucher material used in the population studies have been placed in the University of New Hampshire Herbarium.

The authors wish to thank the curators of the Harvard Herbarium and the New England Botanical Club Herbarium for their permission to consult these collections freely.— DEPARTMENT OF BOTANY, UNIVERSITY OF NEW HAMPSHIRE, DURHAM, NEW HAMPSHIRE AND ST. MARY'S-IN-THE-MOUNTAINS, LITTLETON, NEW HAMPSHIRE.

LITERATURE CITED

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2. —————. 1950. Gray's Manual, 8th edition (footnote on p. 853).
3. BAILEY, L. H. 1944. Gent. Herb. V. 508-512.
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FIFTEENTH REPORT OF
THE COMMITTEE ON PLANT DISTRIBUTION

The fourteenth report included the Dicotyledoneae from Papaveraceae through Platanaceae. The present report deals with the genus *Carex* of the Cyperaceae.

The data for these reports have been compiled from the material found in the herbarium of the New England Botanical Club, in the Gray Herbarium, and in the herbarium of the Peabody Museum at Salem.

PRELIMINARY LISTS OF NEW ENGLAND PLANTS — XL

The sign + indicates that an herbarium specimen has been seen, the sign — that a reliable printed record has been found and the sign * is used for those plants which are not native in the New England area.

CYPERACEAE

	Me.	N. H.	Vt.	Mass.	R. I.	Conn.
<i>Carex abdita</i> Bickn.	+	+	+	+	+	+
<i>Carex abscondita</i> Mackenz.		+		+	+	+
* <i>Carex acutiformis</i> Ehrh.				+		

	Me.	N. H.	Vt.	Mass.	R. I.	Conn.
<i>Carex adusta</i> Boott	+					
<i>Carex aenea</i> Fern.	+	+	+	+		+
<i>Carex aestivalis</i> M. A. Curtis		+	+	+		+
<i>Carex alata</i> T. & G.				+	+	
<i>Carex albolutescens</i> Schwein.		+		+	+	
<i>Carex albursina</i> Sheldon		+	+	+		+
<i>Carex alopecoidea</i> Tuckerm.	+		+	+		+
<i>Carex amphibola</i> Steud. var. <i>rigida</i> (Bailey) Fern.		+		+		+
<i>Carex amphibola</i> var. <i>turgida</i> Fern.	+	+	+	+		+
<i>Carex angustior</i> Mackenz.	+	+	+	+	+	+
<i>Carex annectens</i> Bickn.	+	+	+	+	+	+
<i>Carex annectens</i> var. <i>xanthocarpa</i> (Bickn.) Wieg.		+	—	+		+
<i>Carex aquatilis</i> Wahlenb. var. <i>altior</i> (Rydb.) Fern.	+		+	+		+
<i>Carex arcta</i> Boott	+	+	+	—		
<i>Carex arctata</i> Boott	+	+	+	+	+	+
<i>Carex argyrantha</i> Tuckerm.	+	+	+	+	+	+
<i>Carex artitecta</i> Meckenz.	+	+	+	+	+	+
<i>Carex artitecta</i> var. <i>subtilirostris</i> F. J. Herm.				+		
<i>Carex atherodes</i> Spreng.	+					
<i>Carex atlantica</i> Bailey	+	+	+	+		+
<i>Carex atratifomis</i> Britt.	+	+	+			
<i>Carex aurea</i> Nutt.	+	+	+	+	—	+
<i>Carex Backii</i> Boott	+	+	+	+		
<i>Carex Baileyi</i> Britt.		+	+	+		
<i>Carex Barrattii</i> Schwein. & Torr.						+
<i>Carex Bebbii</i> Olney	+	+	+	+		+
<i>Carex Bicknellii</i> Britt.	+	+	+	+	+	+
<i>Carex Bigelowii</i> Torr.	+	+	+			
<i>Carex blanda</i> Dew.		+	+	+	+	+
<i>Carex brevior</i> (Dew.) Mackenz.	+	+	+	+	+	+
<i>Carex bromoides</i> Schkuhr.	+	+	+	+	+	+
* <i>Carex brunnea</i> Thunb.				+		
<i>Carex brunnescens</i> (Pers.) Poir.	+	+	+			
<i>Carex brunnescens</i> var. <i>sphaerostachya</i> (Tuckerm.) Kükenth.	+	+	+	+		+
<i>Carex bullata</i> Schkuhr.	+	+	—	+	+	+
<i>Carex Bushii</i> Mackenz.						+
<i>Carex Buxbaumii</i> Wahlenb.	+	+	+	+	+	+
<i>Carex canescens</i> L.	+	+	+			
<i>Carex canescens</i> var. <i>disjuncta</i> Fern.	+	+	+	+	+	+
<i>Carex canescens</i> var. <i>subloliacea</i> Laestad.	+	+	+	+	+	+
<i>Carex capillaris</i> L.		+				
<i>Carex capillaris</i> var. <i>major</i> Blytt	+		+			
<i>Carex capitata</i> L.		+				
* <i>Carex caryophyllea</i> Lat.	+			+		
<i>Carex castanea</i> Wahlenb.	+	+	+			+
<i>Carex cephalantha</i> (Bailey) Bickn.	+	+	+	+	+	+
<i>Carex cephaloidea</i> Dew.	+	+	+	+	—	+
<i>Carex cephalophora</i> Muhl.	+	+	+	+	+	+
<i>Carex chordorrhiza</i> L.f.	+		+			
<i>Carex Collinsii</i> Nutt.					+	+
<i>Carex communis</i> Bailey	+	+	+	+	+	+

	Me.	N. H.	Vt.	Mass.	R. I.	Conn.
<i>Carex comosa</i> Boott	+	+	+	+	+	+
<i>Carex conoidea</i> Schkuhr.	+	+	+	+	+	+
<i>Carex convoluta</i> Mackenz.	+	+	+	+	+	+
<i>Carex</i> × <i>copulata</i> (Bailey) Mackenz.		+	+	+		+
<i>Carex Crawei</i> Dew.	+					+
<i>Carex Crawfordii</i> Fern.	+	+	+	+		+
<i>Carex crinita</i> Lam.	+	+	+	+	+	+
<i>Carex crinita</i> var. <i>brevicrinis</i> Fern.				+	+	+
<i>Carex crinita</i> var. <i>gynandra</i> (Schwein.) Schwein. & Torr.	+	+	+	+	+	+
<i>Carex crinita</i> var. <i>minor</i> Boott	+	+	+	+		
<i>Carex crinita</i> var. <i>Porteri</i> (Olney) Fern.	+		+			
<i>Carex crinita</i> var. <i>simulans</i> Fern.	+	+	+	+		
<i>Carex cristatella</i> Britt.		+	+	+		+
<i>Carex cumulata</i> (Bailey) Mackenz.	+	+		+		+
<i>Carex Davisii</i> Schwein. & Torr.			+	+		+
<i>Carex debilis</i> Michx.	+		—			
<i>Carex debilis</i> var. <i>interjecta</i> Bailey		+	+	+		+
<i>Carex debilis</i> var. <i>Rudgei</i> Bailey	+	+	+	+	+	+
<i>Carex debilis</i> var. <i>strictior</i> Bailey	+	+	+	+		
<i>Carex deflexa</i> Hornem.	+	+	+	+		
<i>Carex demissa</i> Hornem.	+	+	+			+
<i>Carex Deweyana</i> Schwein.	+	+	+	+	—	+
<i>Carex diandra</i> Schrank	+	+	+	+		+
<i>Carex digitalis</i> Willd.	+	+	+	+	+	+
<i>Carex disperma</i> Dew.	+	+	+	+		+
<i>Carex eburnea</i> Boott			+	+		+
<i>Carex elachycarpa</i> Fern.	+					
<i>Carex Emmonsii</i> Dew.	+	+	+	+	+	+
<i>Carex exilis</i> Dew.	+	+	+	+	+	
<i>Carex festucacea</i> Schkuhr.				+		+
<i>Carex flaccosperma</i> Dew. var. <i>glaucodea</i> (Tuckerm.) Kükenth.		+	—	+		+
<i>Carex flava</i> L.	+	+	+	+		+
<i>Carex flava</i> var. <i>fertilis</i> Peck	+	+	+	+	+	+
<i>Carex flava</i> var. <i>gaspensis</i> Fern.	+		+			
<i>Carex foenea</i> Willd.	+	+	+	+	+	+
<i>Carex folliculata</i> L.	+	+	+	+	+	+
<i>Carex formosa</i> Dew.		—	+	+		+
<i>Carex Garberi</i> Fern. var. <i>bifaria</i> Fern.	+					
<i>Carex gracilescens</i> Steud.		+	+	+		+
<i>Carex gracillima</i> Schwein.	+	+	+	+	+	+
<i>Carex granularis</i> Muhl.			+	+		+
<i>Carex granularis</i> var. <i>Haleana</i> (Olney) Porter	+	+	+	+		+
<i>Carex Grayii</i> Carey			+	+		+
<i>Carex Grayii</i> var. <i>hispidula</i> Gray						+
<i>Carex gynocrates</i> Wormsk.	+					
<i>Carex</i> × <i>Hartii</i> Dew.	+	+	+	+		
<i>Carex Haydenii</i> Dew.	+	+	+	+		+
<i>Carex hirsutella</i> Mackenz.			+	+	—	+
* <i>Carex hirta</i> L.	+			+		
<i>Carex hirtifolia</i> Mackenz.	+	+	+	+	—	+
<i>Carex Hitchcockiana</i> Dew.			+	+		+
<i>Carex hormathodes</i> Fern.	+	+		+	+	+
<i>Carex hormathodes</i> × <i>straminea</i>				+		

	Me.	N. H.	Vt.	Mass.	R. I.	Conn.
<i>Carex Houghtonii</i> Torr.	+	+	+			
<i>Carex Howei</i> Mackenz.	+	+	+	+	+	+
<i>Carex hystricina</i> Muhl.	+	+	+	+	—	+
<i>Carex incompta</i> Bickn.	+	+		+	+	+
<i>Carex interior</i> Bailey	+	+	+	+	+	+
<i>Carex intumescens</i> Rudge	+	+	+	+	+	+
<i>Carex intumescens</i> var. <i>Fernaldii</i> Bailey	+	+	+	+		+
<i>Carex Josselynii</i> (Fern.) Mackenz.	+					
<i>Carex katahdinensis</i> Fern.	+					
<i>Carex</i> × <i>Knieskernii</i> Dew.	+	+	+	+		
<i>Carex lacustris</i> Willd.	+	+	+	+	+	+
<i>Carex laevivaginata</i> (Kükenth.) Mackenz.	+	+	+	+	+	+
<i>Carex lanuginosa</i> Michx.	+	+	+	+	+	+
<i>Carex lasiocarpa</i> Ehrh. var. <i>americana</i> Fern.	+	+	+	+	+	+
<i>Carex laxiculmis</i> Schwein.	+	+	+	+	+	+
<i>Carex laxiflora</i> Lam.	+	+	+	+	+	+
<i>Carex lenticularis</i> Michx.	+	+	+	+		
<i>Carex lenticularis</i> var. <i>albi-montana</i> Dew.		+				
<i>Carex lenticularis</i> var. <i>Blakei</i> Dew.	+	+	+	+		
* <i>Carex leporina</i> L.	+	+		+		
<i>Carex leptalea</i> Wahlenb.	+	+	+	+	+	+
<i>Carex leptonervia</i> Fern.	+	+	+	+		+
<i>Carex limosa</i> L.	+	+	+	+		+
<i>Carex livida</i> (Wahlenb.) Willd. var. <i>Grayana</i> (Dew.) Fern.	+		+	+		—
<i>Carex Longii</i> Mackenz.	+			+	+	+
<i>Carex lupuliformis</i> Sartwell			+			+
<i>Carex lupulina</i> Muhl.	+	+	+	+	+	+
<i>Carex lupulina</i> var. <i>pedunculata</i> Gray	+	+	+	+	+	+
<i>Carex lurida</i> Wahlenb.	+	+	+	+	+	+
<i>Carex Mackenziei</i> Krecz.	+					
<i>Carex mainensis</i> Porter	+					
<i>Carex Merritt-Fernaldii</i> Mackenz.	+	+	+	+	+	+
<i>Carex mesochorea</i> Mackenz.				—		
<i>Carex Michauxiana</i> Boeckl.	+	+	+	+		
<i>Carex Mitchelliana</i> M. A. Curtis				+	+	
<i>Carex molesta</i> Mackenz.			+	+		+
<i>Carex Muhlenbergii</i> Schkuhr	+	+	+	+	+	+
<i>Carex Muhlenbergii</i> var. <i>enervis</i> Boott		+	+	+	+	+
<i>Carex nigra</i> (L.) Reichard	+	+	—	+	+	
<i>Carex nigra</i> var. <i>strictiformis</i> (Bailey) Fern.	+	+		+		
<i>Carex nigromarginata</i> Schwein.						+
<i>Carex normalis</i> Mackenz.	+	+	+	+	+	+
<i>Carex novae-angliae</i> Schwein.	+	+	+	+		+
<i>Carex oligocarpa</i> Schkuhr			+	+		+
<i>Carex oligosperma</i> Michx.	+	+	+	+		+
<i>Carex</i> × <i>Olneyi</i> Boott		+		+	+	+
<i>Carex ormostachya</i> Wieg.	+	+	+	+		+
<i>Carex oronensis</i> Fern.	+					
<i>Carex paleacea</i> Wahlenb.	+	+		+		
<i>Carex pallescens</i> L. var. <i>neogaea</i> Fern.	+	+	+	+	+	+
* <i>Carex panicea</i> L.	+	+		+	+	+
<i>Carex pauciflora</i> Lightf.	+	+	+	+		+
<i>Carex paupercula</i> Michx.	+	+	+	+		
<i>Carex paupercula</i> var. <i>irrigua</i> (Wahlenb.) Fern.	+	+	+	+		+

	Me.	N. H.	Vt.	Mass.	R. I.	Conn.
<i>Carex paupercula</i> var. <i>pallens</i> Fern.	+	+	+	+		+
<i>Carex Peckii</i> Howe	+	+	+	+		
<i>Carex pedunculata</i> Muhl.	+	+	+	+		+
<i>Carex pensylvanica</i> Lam.	+	+	+	+	+	+
<i>Carex pensylvanica</i> var. <i>distans</i> Peck	+	+	+	+	+	+
<i>Carex plantagiana</i> Lam.	+	+	+	+		+
<i>Carex platyphylla</i> Carey	+	+	+	+	+	+
<i>Carex polymorpha</i> Muhl.	+	+		+	+	+
<i>Carex prairea</i> Dew.	+		+	+		+
<i>Carex prasina</i> Wahlenb.	+	+	+	+		+
<i>Carex praticola</i> Rydb.	+					
<i>Carex projecta</i> Mackenz.	+	+	+	+		+
<i>Carex Pseudo-Cyperus</i> L.	+	+	+	+		+
<i>Carex</i> × <i>pseudohelvola</i> Kihlm.	+					
<i>Carex radiata</i> (Wahlenb.) Dew.	+	+	+	+		+
<i>Carex rariflora</i> (Wahlenb.) Sm.	+					
<i>Carex retroflexa</i> Muhl.			—	+	+	+
<i>Carex retrorsa</i> Schwein.	+	+	+	+		+
<i>Carex Richardsonii</i> R. Br.			+			
<i>Carex rosea</i> Schkuhr	+	+	+	+		+
<i>Carex rostrata</i> Stokes	+	+	+	+	+	+
<i>Carex rostrata</i> var. <i>ambigens</i> Fern.	+			+		
<i>Carex rostrata</i> var. <i>utriculata</i> (Boott) Bailey	+	+	+	+	+	+
<i>Carex salina</i> Wahlenb. var. <i>kattogatensis</i> (Fries) Almq.	+	+		+		
<i>Carex salina</i> × <i>stricta</i>				+		
<i>Carex saxatilis</i> L. var. <i>miliaris</i> (Michx.) Bailey	+					
<i>Carex saxatilis</i> var. <i>rhomalea</i> Fern.	+					
<i>Carex scabrata</i> Schwein.	+	+	+	+	+	+
<i>Carex scirpoidea</i> Michx.	+	+	+			
<i>Carex Schweinitzii</i> Dew.			+	+		+
<i>Carex scoparia</i> Schkuhr	+	+	+	+	+	+
<i>Carex scoparia</i> var. <i>tesselata</i> Fern. & Wieg.	+					
<i>Carex seorsa</i> Howe				+	+	+
<i>Carex</i> × <i>setacea</i> Dew.			+	+		+
<i>Carex silicea</i> Olney	+	+		+	+	+
<i>Carex sparganioides</i> Muhl.	—	+	+	+		+
* <i>Carex spicata</i> Huds.	+	+		+	+	+
<i>Carex Sprengelii</i> Dew.	+	+	+	+		+
<i>Carex squarrosa</i> L.				+	+	+
<i>Carex sterilis</i> Willd.	+			+		+
<i>Carex stipata</i> Muhl.	+	+	+	+	+	+
<i>Carex straminea</i> Willd.				+		+
<i>Carex striatula</i> Michx.				+		+
<i>Carex stricta</i> Lam.	+	+	+	+	+	+
<i>Carex stricta</i> var. <i>strictior</i> (Dew.) Carey	+	+	+	+	+	+
<i>Carex styloflexa</i> Buckl.						+
<i>Carex Swanii</i> (Fern.) Mackenz.	+	+	+	+	+	+
<i>Carex tenera</i> Dew.	+	+	+	+	+	+
<i>Carex tenera</i> var. <i>echinodes</i> (Fern.) Wieg.			—			+
<i>Carex tenuiflora</i> Wahlenb.	+		+	—		
<i>Carex tetanica</i> Schkuhr				+		+
<i>Carex tinctoria</i> Fern.	+	+	+	+		+
<i>Carex tonsa</i> (Fern.) Bickn.	+	+	+	+	+	+

	Me.	N. H.	Vt.	Mass.	R. I.	Conn.
<i>Carex torta</i> Boott	+	+	+	+	—	+
<i>Carex tribuloides</i> Wahlenb.	+	+	+	+	+	+
<i>Carex</i> × <i>trichina</i> Fern.	+					
<i>Carex trichocarpa</i> Muhl.			+	+		+
<i>Carex trisperma</i> Dew.	+	+	+	+	+	+
<i>Carex trisperma</i> var. <i>Billingsii</i> Knight	+	+	+	+	+	+
<i>Carex Tuckermani</i> Boott	+	+	+	+	—	+
<i>Carex typhina</i> Michx.	+		+	+		+
<i>Carex umbellata</i> Schkuhr	+	+	+	+	+	+
<i>Carex vaginata</i> Tausch	+		+			
<i>Carex vesicaria</i> L.	+	+	+	+	+	+
<i>Carex vesicaria</i> var. <i>distenta</i> Fries	+		+			+
<i>Carex vesicaria</i> var. <i>jejuna</i> Fern.	+	+	+	+	+	+
<i>Carex vesicaria</i> var. <i>monile</i> (Tuckerm.) Fern.	+	+	+	+	+	+
<i>Carex vesicaria</i> var. <i>Raeana</i> (Boott) Fern.	+	+				
<i>Carex vestita</i> Willd.	+	+		+	+	+
<i>Carex virescens</i> Muhl.	+	+	+	+	+	+
<i>Carex viridula</i> Michx.	+	+	+	+	+	+
<i>Carex vulpinoidea</i> Michx.	+	+	+	+	+	+
<i>Carex Walteriana</i> Bailey var. <i>brevis</i> Bailey				+	—	
<i>Carex Wiegandii</i> Mackenz.	+		+	+		
<i>Carex Willdenowii</i> Schkuhr			+	+		+
<i>Carex Woodii</i> Dew.				—		+

Carex was treated by Prof. M. L. Fernald in *Rhodora* 4:218-230. Since then the number of specimens available for study has become very much larger and also there has been a considerable change in nomenclature. It consequently seemed desirable to reevaluate the genus in the light of the more abundant material. At the conclusion of his report Prof. Fernald added "Suggestions for Special Observations". It is interesting to note that in at least half the species cited, the extension of range that he anticipated has been confirmed.

In contrast to the previous reports the number of introduced species is insignificant. There are only seven in our New England area and of these, two were not included in Prof. Fernald's list.

The geographical areas are in general the same as in the previous reports.

I. GENERALLY DISTRIBUTED. — *Carex angustior*, *C. canescens* var. *disjuncta* and var. *sublobiacea*, *C. cephalantha*, *C. crinita* and var. *gynandra*, *C. debilis* var. *Rudgei*, *C. intumescens*, *C. lasiocarpa* var. *americana*, *C. leptalea*, *C. limosa*, *C. pallescens* var. *neogaea*, *C. rostrata* and var. *utriculata*, *C. stipata*, *C. striata*, *C. tenera*, *C. trisperma* and var. *Billingsii*, *C. vulpinoidea*.

Carex limosa apparently is absent from southern New Hampshire, southern Connecticut and all of Rhode Island. *C. tenera* is largely absent from Aroostook County, Maine with only one station at Fort Fairfield, is represented by only one specimen each in Plymouth County at Bridgewater and in Barnstable County at Provincetown, and is absent from Rhode Island.

Ia. GENERAL, EXCEPT CAPE COD. — *Carex arctata*, *C. bromoides*, *C. brunnescens* var. *sphaerostachya*, *C. communis*, *C. conoidea*, *C. Deweyana*, *C. disperma*, *C. flava* and var. *fertilis*, *C. Haydenii*, *C. hystericina*, *C. lacustris*, *C. leptonervia*, *C. pedunculata*, *C. projecta*, *C. scabrata*, *C. tribuloides*, *C. vesicaria* and vars. *monile* and *jejuna*.

Carex bromoides is infrequent north of 45°. *C. brunnescens* var. *sphaerostachya* is not yet known from Rhode Island or southern Connecticut. *C. conoidea* has not been found on Nantucket. *C. Deweyana* has not yet been reported from Rhode Island or southern Connecticut and only two stations are known in eastern Massachusetts. *C. flava*, *C. hystericina*, *C. pedunculata* and *C. projecta* are absent from Plymouth and Bristol counties in Massachusetts and from Rhode Island. *C. scabrata* belongs in this category except for a single specimen from Sandwich, Massachusetts. *C. tribuloides* occurs on Cape Cod but only at Woods Hole and Falmouth, Massachusetts.

Ib. GENERAL, EXCEPT CAPE COD AND THE MAINE COAST EAST OF THE KENNEBEC RIVER. — *Carex torta* belongs here but it seems to avoid all the coast from the Quinnipiack River in Connecticut northeastward.

Ic. GENERAL, EXCEPT CAPE COD AND WASHINGTON COUNTY, MAINE. — *Carex abdita*, *C. convoluta*, *C. Buxbaumii*, *C. gracillima*, *C. interior*, *C. stricta* var. *strictior*. Although absent from Cape Cod there is a specimen of *C. abdita* from Martha's Vineyard. *C. convoluta* is rare north of 45°. *C. Buxbaumii* is a rather uncommon species with only one station in New Hampshire at Columbia in Coos County, and three in Vermont. In southern New England it seems to be concentrated west and north of Boston. There is one specimen of *C. interior* from Nantucket. *Carex stricta* var. *strictior*, although a rich woods species, is represented by two specimens from Martha's Vineyard annotated by K. K. Mackenzie.

IIa. NORTHERN — NOT OR NOT MUCH SOUTH OF 43°. — *Carex aenea*, *C. arcta*, *C. atratiformis*, *C. Backii*, *C. canescens*, *C. crinita* var. *minor* and var. *simulans*, *C. demissa*, *C. gynocrates*, *C. Houghtonii*, *C. lenticularis* and var. *Blakei*, *C. Michauxiana*, *C. paupercula* and var. *irrigua*, *C. Peckii*, *C. scirpoidea*, *C. tenuiflora*, *C. vesicaria* var. *Raeana*, *C. Wiegandii*. *C. atratiformis* is infrequent and chiefly calcicolous. Although *C. Backii* is a northern species it is not represented by any specimen north of 45°. *C. demissa* is adventive along the coast in southern Connecticut. *C. gynocrates* apparently is restricted to the calcareous areas of northern Maine with no station south of 45°.

C. scirpoidea is found chiefly in mountainous areas. *C. tenuiflora* is apparently a species of basic soils and is rare in New England.

IIb. NORTHERN — NUMEROUS STATIONS SOUTH OF 43°. — *Carex Crawfordii*, *C. deflexa*, *C. intumescens* var. *Fernaldii*, *C. novae-angliae*, *C. oligosperma*, *C. ormostachya*, *C. pauciflora*, *C. paupercula* var. *pallens*, *C. Pseudo-Cyperus*, *C. retrorsa*, *C. tinctoria*. *C. intumescens* var. *Fernaldii* is absent from Rhode Island and is known from a single station, Colebrook, in northwestern Connecticut. *C. ormostachya* and *C. tinctoria* have their southernmost stations chiefly in western Massachusetts. *C. pauciflora*, south of 43°, occurs at several stations in western Massachusetts and at one in Norfolk in northwestern Connecticut. *C. retrorsa*, south of 43°, is confined to and is frequent in western New England.

III. ARCTIC-ALPINE. — *Carex Bigelowii*, *C. brunnescens*, *C. capillaris*, *C. capitata*, *C. lenticularis* var. *albi-montana*, *C. katahdinensis*, *C. mainensis*, *C. rariflora*, *C. saxatilis* var. *miliaris* and var. *rhomalea*. *C. Bigelowii* is found on some of the lower mountains in northern New England and thus is not exclusively arctic-alpine.

IVa. SOUTHERN — GENERAL SOUTH OF 45°. — *Carex artitecta*, *C. comosa*, *C. cumulata*, *C. Emmonsii*, *C. folliculata*, *C. lupulina*, *C. lurida*, *C. Merritt-Fernaldii*, *C. pennsylvanica*, var. *distans*, *C. scoparia*, *C. tonsa*. *C. artitecta* is very sparsely represented in the three northern states. *C. cumulata* is absent from Massachusetts west of the Connecticut River except for stations at Sheffield and Mt. Washington. North of 43° *C. Emmonsii* is entirely coastal except for one station at Burlington, Vermont. *C. tonsa* is very sparsely represented in the three northern states.

IVb. SOUTHERN — GENERAL SOUTH OF 45° BUT NOT ON MAINE COAST EAST OF THE KENNEBEC RIVER. — *Carex annectens* and var. *xanthocarpa*, *C. blanda*, *C. Howei*. *C. annectens* var. *xanthocarpa* is local with only seven stations.

IVc. SOUTHERN — GENERAL SOUTH OF 45° BUT NOT IN WASHINGTON COUNTY. — *Carex atlantica*, *C. digitalis*, *C. pennsylvanica*, *C. Swanii*, *C. umbellata*, *C. virescens*.

IVd. SOUTHERN — SOUTH OF 45° BUT NOT ON CAPE COD. — *Carex argyrantha*.

IVe. SOUTHERN — GENERAL SOUTH OF 45° BUT NEITHER ON CAPE COD NOR IN WASHINGTON COUNTY. — *Carex brevior*, *C. cephalophora*, *C. foenea*, *C. laxiflora*, *C. lupulina* var. *pedunculata*, *C. normalis*, *C. platyphylla*, *C. prasina*, *C. radiata*. *C. cephalophora* is local north of 43°. *C. lupulina* var. *pedunculata* occurs on both Martha's Vineyard and Nantucket but not on Cape Cod.

V. CHIEFLY THE THREE SOUTHERN STATES. — *Carex incompta*, *C. laevigata*, *C. laxiculmis*, *C. Muhlenbergii* and var. *enervis*, *C. vestita*. *C. Muhlenbergii* has numerous stations in extreme southwestern Maine

and southeastern New Hampshire and two stations in Vermont. *C. Muhlenbergii* var. *enervis* apparently prefers more basic soils.

Va. CHIEFLY THE THREE SOUTHERN STATES BUT NOT IN WESTERN MASSACHUSETTS. — *Carex alata*, *C. bullata*, *C. Longii*. *C. alata* is confined to eastern Massachusetts and Rhode Island.

Vb. CHIEFLY THE THREE SOUTHERN STATES BUT NOT ON CAPE COD. — *Carex aestivalis*, *C. flaccosperma* var. *glaucodea*, *C. polymorpha*, *C. retroflexa*, *C. seorsa*, *C. aestivalis* is absent from Rhode Island and is local in northeastern Connecticut.

Vc. CHIEFLY THE THREE SOUTHERN STATES BUT NEITHER CAPE COD NOR WESTERN MASSACHUSETTS. — *Carex abscondita*, *C. Bicknellii*, *C. festucacea*, *C. straminea*, *C. striatula*. *C. festucacea* is infrequent. *C. striatula* is local with only six stations.

VI. SOUTHWESTERN NEW ENGLAND CHIEFLY. — *Carex Bushii*, *C. Davisii*, *C. nigromarginata*.

VII. WESTERN NEW ENGLAND, CHIEFLY WEST OF THE CONNECTICUT VALLEY. — *Carex Baileyi*, *C. cristatella*, *C. gracilescens*, *C. hirsutella*, *C. squarrosa*. *C. Baileyi* is largely confined to Vermont, save for one station at Cheshire in western Massachusetts and one at Franconia, New Hampshire. *C. cristatella* occurs chiefly in western New England but with isolated stations in eastern Massachusetts and New Hampshire. *C. gracilescens* is occasional on basic soils near Boston and occurs at a single station in Coos County and one in Grafton County, New Hampshire. The Boston and Providence stations for *C. squarrosa* doubtless represent waifs.

VIIIa. COASTAL PLAIN PROPER. — *Carex Mitchelliana*, *C. Walteriana* var. *brevis*.

VIIIb. COASTAL PLAIN EXTENSIONS. — *Carex albolutescens* is a southern coastal plain species that also occurs at Westwood, Massachusetts and at two stations in southeastern New Hampshire.

IXa. CALCICOLOUS — CHIEFLY WEST OF THE CONNECTICUT RIVER IN THE SOUTH, IF IN THE EAST MOSTLY NORTH OF 45°. — *Carex albursina*, *C. alopecoidea*, *C. amphibola* var. *rigida* and var. *turgida*, *C. capillaris* var. *major*, *C. castanea*, *C. Crawei*, *C. eburnea*, *C. elachycarpa*, *C. flava* var. *gaspensis*, *C. formosa*, *C. Garberi* var. *bifaria*, *C. granularis*, *C. Grayii*, *C. Hitchcockiana*, *C. Josselynii*, *C. lupuliformis*, *C. oligocarpa*, *C. Schweinitzii*, *C. tetanica*, *C. trichocarpa*, *C. typhina*, *C. vaginata*.

The majority of these calciphiles occur only in the limestone area of western New England. *C. alopecoidea* has one station at Vassalboro, Kennebec County, Maine. *C. amphibola* var. *turgida* is of more northern distribution than var. *rigida* which has not been reported north of 43° 30'. *C. capillaris* var. *major*, *C. Garberi* var. *bifaria*, *C. elachycarpa*, *C. flava* var. *gaspensis* and *C. Josselynii* are restricted to the calcareous regions of Aroostook County, Maine. *C. castanea* occurs in limy areas in both western and northern New England.

C. Crawei has been reported from only four stations, two in the Aroostook Valley and two in the upper Housatonic Valley in Connecticut. *C. trichocarpa* is absent from most of Vermont. Apparently the only station east of the Connecticut River for *C. typhina* is the one at Leeds, Maine.

IXb. PLANTS OF BASIC SOILS, NOT NECESSARILY LIMESTONES. — *Carex aquatilis* var. *altior*, *C. aurea*, *C. Bebbii*, *C. cephaloidea*, *C. diandra*, *C. granularis* var. *Haleana*, *C. hirtifolia*, *C. lanuginosa*, *C. plantaginea*, *C. prairea*, *C. rosea*, *C. sparganioides*, *C. Sprengellii*, *C. Tuckermani*. *C. aurea* in our area is not necessarily a calciphile. *C. Bebbii* is infrequent and is not reported from Rhode Island or eastern Connecticut. *C. cephaloidea*, *C. hirtifolia* and *C. sparganioides* are rich woods plants not collected north of 45°. *C. plantaginea* is an inland species with no stations on the coast. It is rare north of 45°.

Xa. MARITIME IN VICINITY OF COAST. — *Carex hormathodes*, *C. Mackenziei*, *C. paleacea*, *C. salina* var. *kattegatensis*, *C. silicea*. A hybrid of *C. hormathodes* and *C. straminea* has been found on Nantucket. *C. Mackenziei* is northern and has not been reported south of York County, Maine. *C. paleacea* is northern extending southward to Plymouth, Massachusetts. *C. salina* var. *kattegatensis* is also northern and is absent south of Boston. A hybrid of *C. salina* var. *kattegatensis* and *C. stricta* is reported from Arlington and Medford, Massachusetts.

Xb. MARITIME WITH INLAND STATIONS. — *Carex nigra* and var. *strictiformis*. The latter has a similar distribution, but is much less common.

XI. MISCELLANEOUS. — *Carex adusta*, *C. artitecta* var. *subtilirostris*, *C. atheroides*, *C. Barrattii*, *C. chordorrhiza*, *C. Collinsii*, *C.x copulata*, *C. crinita* var. *brevirostris* and var. *Porteri*, *C. debilis* and var. *interjecta* and var. *strictior*, *C. exilis*, *C. Grayii* var. *hispidula*, *C.x Hartii*, *C.x Knieskernii*, *C. livida* var. *Grayana*, *C. mesochorea*, *C. molesta*, *C.x Olneyi*, *C. oronensis*, *C. praticola*, *C.x pseudohelvola*, *C. Richardsonii*, *C. rostrata* var. *ambigens*, *C. salina* x *stricta*, *C. scoparia* var. *tesselata*, *C.x setacea*, *C. sterilis*, *C. tenera* var. *echinoides*, *C.x trichina*, *C. vesicaria* var. *distenta*, *C. viridula*, *C. Willdenowii*, *C. Woodii*.

C. adusta occurs only east of the Penobscot River near the coast. *C. artitecta* var. *subtilirostris* has only one station at Malden in eastern Massachusetts. *C. atheroides* has only one station at Rockland, Maine and is possibly a waif. *C. Barrattii* and *C. Collinsii* are southern in distribution reaching their northeastern limit in Connecticut and Rhode Island. *C. chordorrhiza* is a northern species and very local, occurring only in eastern Maine and western Vermont. *C.x copulata* is reported from four stations, Grafton, New Hampshire; Newfane, Vermont; Sandisfield, Massachusetts, and Waterford, Connecticut. *C. crinita* var. *brevirostris* occurs only at Cohasset, Massachusetts; Providence, Rhode Island, and Bridgeport and Danbury, Connecticut.

C. crinita var. *Porteri* has two stations, Monhegan, Maine, and Hancock, Vermont. *C. debilis* has been found on Martha's Vineyard and Nantucket only. *C. debilis* var. *interjecta* has three stations in New Hampshire, one at South Burlington, Vermont, seven in Massachusetts and one in Connecticut. *C. debilis* var. *strictior* has one station in Maine at Brownville, eleven in New Hampshire, one at Willoughby, Vermont and one at Bellingham, Massachusetts. *C. exilis* is concentrated in northeastern Massachusetts but otherwise has only widely scattered stations. *C. Grayii* var. *hispidula* has two stations, Hartford and Middletown, Connecticut. *C. x Hartii* has seven scattered stations in New England. *C. x Knieskernii* is represented by only five stations in our whole area. *C. livida* var. *Grayana*, a calcicolous species, is placed here as in all New England there are only six stations, two in Aroostook County, Maine, one in western Vermont and three in northeastern Massachusetts. *C. mesochorea* is cited in Gray's Manual from Massachusetts but no specimen has been seen. *C. molesta* has only four stations in New England, Concord, Massachusetts; Ferrisburg, Vermont, and Bethlehem and Southington, Connecticut, *C. x Olneyi* has twelve stations in southeastern New England. *C. oronensis* seems to be endemic along the lower Penobscot River in Maine. *C. praticola* is a northern species at its southern limit with two stations only in northern Maine, at Island Falls and Masardis, both in Aroostook County. *C. x pseudohelevola* has two stations in extreme southeastern Maine at Moose Island and Pembroke. *C. Richardsonii* is represented by a single station at Mt. Equinox in Manchester, Vermont where it is abundant. *C. rostrata* var. *ambigens* has three stations, at St. Francis, Maine and Monterey and Springfield, Massachusetts. *C. salina* x *stricta* was collected in 1858 at Medford and in 1887 at Arlington in eastern Massachusetts. *C. scoparia* var. *tesselata* has three stations on the Maine coast east of the Penobscot River. *C. x setacea* is apparently a hybrid with only four stations in our area. *C. sterilis* has one station at Presque Isle in northeastern Maine and three in Connecticut. *C. tenera* var. *echinoides* has three stations only, one at South Hero, Vermont and two in Connecticut at East Hampton and North Canaan. *C. x trichina* has been collected at two stations in the Aroostook Valley, Maine at Chapman and Fort Fairfield. *C. vesicaria* var. *distenta* has only ten widely scattered stations. Perhaps this should be recognized only as a form and not as a good variety. *C. viridula* is placed in this category as it is in part coastal and in part inland chiefly calciphile. Possibly this species requires further study. *C. Willdenowii* has four stations only in New England, one at Sudbury in western Vermont, two at Malden and Randolph in eastern Massachusetts and one at East Haven in southern Connecticut. *C. Woodii* has two stations only at Salisbury and New Milford in extreme western Connecticut.

XII. INTRODUCED SPECIES. — *Carex acutiformis*, *C. brunnea*, *C. caryophylla*, *C. hirta*, *C. leporina*, *C. panicea*, *C. spicata*. *C. acutiformis* is reported only from the vicinity of Boston. *C. brunnea* has been collected but once — at Salem, Massachusetts. —

R. C. BEAN, A. F. HILL, R. J. EATON

OCCURRENCE OF SPECIES OF POLYCARPAEA LAM. (CARYOPHYLLACEAE) IN NORTH AMERICA

OLGA LAKELA

Plants unknown to the author were discovered in a marginal area of sandhill off Overlook Drive, adjacent to the business district of Temple Terrace, Tampa, Florida. The plants, reminiscent of *Paronychieae*, were localized in openings of the vegetation, prevailingy of grasses and composites, and a few dwarf live oak. Their compact clusters of silver white cymes in late anthesis and in fruit, gave a touch of luster to the nondescript background. Collection no. 23410 was made October 15, 1960. Subsequently, nos. 24530, August 7, and 24779, October 18, 1961, were collected from the same site.

In the meantime, a search of the area revealed a wider distribution, east of Overlook Drive and 56th Street. The plant is well established on a grassy terrace adjoining the grounds of Temple Terrace School southside, and in the margin of a field about 1 block north of the school. Its sporadic occurrence was discovered in the area embracing largely the abandoned Henderson Hillsborough International Airport, extending over two miles northwest from Temple Terrace. There it is surviving in grassy and weedy vegetation along the old runways and road boulevards. Collection no. 24916, March 18, 1962 consists of post-mature plants with clusters of cymes, faded in everlasting fashion.

Discovery of the novelty raised the question of its specific identity. Dr. Carroll E. Wood, Jr., referred it tentatively to *Polycarpaea corymbosa* (L.) Lam. (*Achyranthes corym-*