

# NEW DISTRIBUTIONAL RECORDS OF AQUATIC VASCULAR PLANTS FROM SOUTHERN ILLINOIS

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**ABSTRACT.**— Investigation of aquatic environments in the twenty-three southern counties of Illinois has yielded 217 county distributional records of vascular plants. A short discussion of geographical distributions pertaining primarily to southern Illinois accompanies the specimens cited in the annotated checklist.

Aquatic habitats were investigated during the summer of 1963, to update and to extend the distributional ranges of hydrophytic and amphibious vascular plants in southern Illinois.

In this paper, southern Illinois is defined as the twenty-three most southern counties from Wabash County west to St. Clair County and south to State of Kentucky. Thus, this part of the state at its greatest width and length encompasses an area approximately 144 miles wide and 106 miles long, giving the lower end of Illinois a wedge-shaped appearance. These twenty-three counties, which are bordered on the west by the Mississippi River and on the south and east by the Ohio and Wabash Rivers, respectively, comprise a total land mass of 9,496 square miles (Fig. 1).

## ECOLOGICAL CONSIDERATIONS

With a yearly mean rainfall of 43 (40-46) inches (Changnon, 1963)

and with relatively impervious clay soils, southern Illinois has numerous natural and artificial impoundments and streams. In recent years, emphasis has been placed upon the creation of man-made storage reservoirs, farm ponds, and lakes, such as Lake Murphysboro, Pounds Hollow Lake, Lake Glendale, Washington County Conservation Lake, Little Grassy Lake, and Harrisburg North Reservoir. These recently impounded waters provide an excellent opportunity for aquatic plants to extend their ranges. The authors concentrated upon visiting some of the major water areas in each county. Most frequently investigated aquatic areas and moist supralittorals, in their decreasing order of emphasis, are lakes, water-storage reservoirs, swamps, farm ponds, roadside ditches, strip pits, and an occasional lotic habitat.

Many of the eutrophic lakes of southern Illinois often possess a similar flora. Associated plants include *Nelumbo lutea*, *Polygonum* spp., *Potamogeton americanus*, *Najas guadalupensis*, *Juncus* spp., *Carex* spp., *Sagittaria latifolia*, and *Cephalanthus occidentalis* which typically inhabit long standing waters and adjacent moist shorelines (Fig. 2). Newer impoundments (for example,

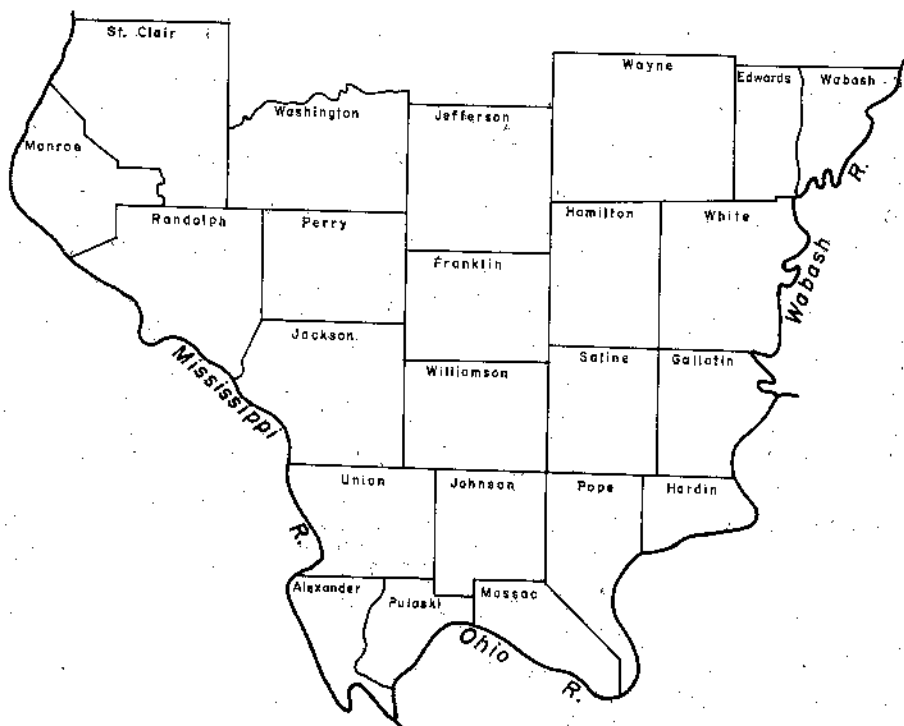


FIGURE 1.—Map of southern Illinois study area showing the counties and the bordering rivers.

Washington County Conservation Lake and Devil's Kitchen Lake) are characterized by pioneer species, such as *Potamogeton diversifolius*, *Najas minor*, *Jussiaea diffusa*, and the common emergent, *Typha latifolia*.

The aquatic vegetation of swampy areas represents a unique lentic environment, since in no other community are more typically associated plants confined to a single habitat. Mermet Swamp, a 690 surface acre natural impoundment, located in Mermet Lake Conservation Area (Massac County), represents such a station which apparently has not previously been botanized with respect to the hydrophytic vascular

plants. Some of the unusual county records from this station include the predaceous blatterworts (*Utricularia vulgaris* and *U. gibba*), fanwort (*Cabomba caroliniana*), and the gelatinous-leaved watershield (*Brasenia schreberi*). The sponge plant or frogbit, (*Limnobium spongia*) and various duckweeds are found drifting on the stagnant surface waters. Although present, species of *Wolffia*, *Lemna*, and *Spirodela* are omitted from this description, since there were no distributional records.

At Mermet, the American lotus (*Nelumbo lutea*) dominates the shallows and is slowly encroaching upon the remaining open water areas (Fig.



FIGURE 2.—Looking east along the north shore of Lake Glendale in July. Lowland vegetation includes the bald cypress (*Taxodium distichum*) and dense stands of the common cat-tail (*Typha latifolia*). The American lotus (*Nelumbo lutea*) and water willow (*Dicentra americana*) grow in the shallow water areas. Photograph by James E. Ellis.



FIGURE 3.—August in Mermel Swamp. Acres of flowering, yellow lotus (*Nelumbo lutea*) cover the water surface. A black willow (*Salix nigra*) thicket is seen in the background. Photograph by Paul L. Fore.

3). Other rooted vegetation exhibiting aerial vegetative structures includes the arrowheads (*Sagittaria brevirostra* and *S. latifolia*), burhead (*Echinodorus cordifolius*), yellow pond-lily (*Nuphar advena*), and the common cat-tail (*Typha latifolia*). These amphibious plants not only characterize, but also help define, the term "swamp", that is to say, an advanced stage of lake succession.

A discussion of the varied aquatic habitats in southern Illinois is given by Mohlenbrock, Dillard, and Abney (1961). For aquatic floristic studies of Pine Hills Swamp (Union County), Devil's Kitchen Lake (Williamson County), Lake Murphysboro (Jackson County), and strip mine waters in southern Illinois, refer to Mohlenbrock (1959), Stookey, Fore, and Mohlenbrock (in press), Mohlenbrock, Et Al (in press), and Bell (1956), respectively.

#### DISTRIBUTIONAL CONSIDERATIONS

Some of the more surprising and rare finds made in the course of this study include *Heteranthera limosa* (second county record from Illinois), *Leersia virginica* var. *ovata* (new Illinois state record for the variety), *Cabomba caroliniana* (fourth state county record), and *Potamogeton crispus* (first station in southern Illinois). Other unusual and seldom collected aquatic and amphibious species from the southern third of Illinois include *Sagittaria graminea*, *Lemna perpusilla*, *Najas minor*, *N. guadalupensis*, *Juncus diffusissimus*, *Wolffia papulifera*, and *Myriophyllum pinnatum*. *Najas minor* is of particular interest, since it was first discovered in Illinois in 1963 in Lake Murphysboro

(Fore and Mohlenbrock, in press). Subsequent investigations reveal that this species is fairly common and may occasionally dominate the submerged hydric community as demonstrated by its occurrence in Harrisburg North Reservoir (Saline County).

The distributions of aquatic vascular plants of Illinois are enumerated by Winterringer and Evers (1961) and by Jones and Fuller (1955) in an earlier publication. Subsequent taxonomic studies by Mohlenbrock and Drapalik (1962), by Fore and Mohlenbrock (in press), by DeFilippis (1964), and by Mohlenbrock (1963) are utilized wherever applicable. On the basis of the previously published reports, a total of 217 new county records (for southern Illinois) is reported, which includes 90 species, 58 genera, and 39 families.

#### ANNOTATED CHECKLIST OF AQUATIC DISTRIBUTIONAL RECORDS

The specimens of this study are on deposit in the Southern Illinois University Herbarium (SIU). Fore and Stookey collected these aquatics during the summer of 1963; their names and the collection dates are omitted from this checklist to prevent repetition. Reference to specimens in the following text is by italicized numbers. The nomenclature conforms to Jones (1963). Distributional data apply primarily to southern Illinois; however, previously published county records are not always indicated.

#### Equisetaceae Rich.

*Equisetum hyemale* L. Tall scouring-rush is very common in moist situations.

County record. — JEFFERSON: Mt. Vernon City Reservoir, 759.

**Salviniaceae Reichenb.**

*Azolla mexicana* Presl. Although somewhat rare, this species is now known from five locations in southern Illinois.

County record. — FRANKLIN: Plumfield Lake, N. of Plumfield, 675 and strip pit, 1 mi. W. of Zeigler, 674.

**Taxodiaceae Schimper**

*Taxodium distichum* (L.) Rich. Bald cypresses are usually restricted to counties bordering the Mississippi, Ohio, and Wabash Rivers. This collection represents the northwest limit of its distribution in Illinois. However, the occurrence in Washington County may not represent natural dispersion, but rather establishment by man.

County record. — WASHINGTON: Nashville Reservoir, 1 mi. E. of Nashville, 635.

**Typhaceae J. St. Hil.**

*Typha angustifolia* L. This finding represents the fourth station from the southern part of the state.

County record. — JACKSON: Lake Murphysboro, 504.

*Typha latifolia* L. This distinctive emergent is abundant in the shallow waters and along the shorelines of most lakes and ponds.

County records. — EDWARDS: Shale strip pit, ½ mi. S. of Albion, 720.

GALLATIN: Pounds Hollow Lake, 587.

JEFFERSON: L. & N. Lake, in Mt. Vernon, 758. MASSAC: Mermet Swamp, 558.

PERRY: Strip pits on Du Quoin Fair Grounds, 620. WAYNE: Roadside ditch, 1 mi. N. of Wayne City, 734 and temporary roadside pond, 3 mi. S. of Wayne City, 769. WHITE: Norris City Reservoir, 705.

**Naladaceae Lindl.**

*Najas guadalupensis* (Spreng.) Magn. Jackson and Williamson Counties represent the former records from southern Illinois (Winterringer and Evers, 1960). Subsequent investigations by Fore and Mohlenbrock (in press) and by the authors demonstrate that *N. guadalupensis* frequently inhabits (often in dense stands) older lakes and farm ponds in this part of the state.

County records. — FRANKLIN: Lake

Benton, N. of Benton, 673; West Frankfort City Lake, near Thompsonville, 672; and Moses Lake, W. of Benton, 677. HAMILTON: Jay's Lake, 692 and McLeansboro City Reservoir, 691. JEFFERSON: Bluford Lake, 757 and Mt. Vernon Reservoir, 807. JOHNSON: Vienna City Reservoir, 545. PERRY: Du Quoin Reservoir, 304 and Lake Salateeska, 5 mi. N. of Pinckneyville, 618. POPE: Lake Glendale, 302. RANDOLPH: Henderson's Lake, near Sparta, 651 and Coulterville Reservoir, 303. ST. CLAIR: Forest Park Inn Lake, 1 mi. NW. of Tilden, 638. WHITE: Sandy Run Lake, 4 mi. S. of Norris City, 794.

*Najas minor* All. All stations for the Eurasian naiad are located in southern Illinois, where it was previously reported from two lakes in Jackson and Williamson Counties (Stookey, Fore, and Mohlenbrock, in press). At present, *N. minor* exhibits a rather compact distribution, since it is known from eleven stations located in nine adjoining counties. Investigation of submerged habitats in northern Illinois may greatly extend its present range.

County records. — FRANKLIN: West Frankfort City Lake, ½ mi. S. of Thompsonville, 670 and West Frankfort Reservoir, near West Frankfort, 669. GALLATIN: Pounds Hollow Lake, 580. HAMILTON: McLeansboro Reservoir, 690 and Jay's Lake, 689. JEFFERSON: Mt. Vernon Reservoir, 755. JOHNSON: Vienna Reservoir, 544. POPE: Lake Glendale, 564. SALINE: Harrisburg North Reservoir, 1 mi. E. of Galatia, 588.

**Potamogetonaceae Engler**

*Potamogeton americanus* C. & S. The distribution of this species is statewide; it is probably abundant in suitable waters in every Illinois county.

County records. — FRANKLIN: West Frankfort City Lake, 668. PERRY: Pyatts strip pits, 617 and strip pit, Du Quoin State Fair Grounds, 615. SALINE: Harrisburg North Reservoir, 587. ST. CLAIR: Forest Park Inn Lake, 1 mi. NW. of Tilden, 637. WASHINGTON: Washington County Conservation Lake, 634.

*Potamogeton crispus* L. This is the first collection of this native of Europe from the southern half of the state.

County record. — EDWARDS: Limestone quarry pond, ½ mi. S. of Albion, 719.

*Potamogeton diversifolius* Raf. This pi-

once aquatic inhabits most lakes in southern Illinois.

*County records.* — FRANKLIN: West Frankfort Reservoir, 607. GALLATIN: Pounds Hollow Lake, 579. HAMILTON: In creek, 2 mi. S. of Keene, 688 and Frey Lake, 1 mi. W. of Belle Prairie, 687. MASSAC: Mermet Swamp, 557. PERRY: Lake Sallateeska, 5 mi. N. of Pinckneyville, 614. WAYNE: Roadside pond, 5 mi. E. of Fairfield, 738. WHITE: Sandy Run Lake, 4 mi. S. of Norris City, 708.

*Potamogeton foliosus* Raf. Chiefly occurring in the northern part of the state, this species is now known from six southern counties.

*County records.* — JEFFERSON: Jaycee Lake, N. of Mt. Vernon, 754. JOHNSON: Stone quarry, N. of Vienna, 548. POPE: Lake Glendale, 563. WASHINGTON: Washington County Conservation Lake, 633.

*Potamogeton pectinatus* L. In addition to the previously reported stations in St. Clair and Wabash Counties, the Perry County collection represents the most southern range extension of this species in Illinois.

*County record.* — PERRY: Pinckneyville Reservoir, 613.

*Potamogeton pusillus* L. This aquatic was thought to have a sparse distribution throughout southern Illinois, since it was previously recorded only from Wabash and St. Clair localities. The discovery of *P. pusillus* in Johnson County represents the southern limit of its Illinois distribution.

*County records.* — EDWARDS: Shale strip pit, ½ mi. S. of Albion, 713. FRANKLIN: Lake Benton, N. of Benton, 666. HAMILTON: Jay's Lake, 686. JACKSON: Lake Murphysboro, 503. JOHNSON: Fern Clyde Lake, 443. PERRY: Du Quoin Reservoir, 612. WASHINGTON: Washington County Conservation Lake, 632.

#### Alismaceae DC.

*Alisma subcordatum* Raf. This species is widely distributed throughout Illinois.

*County records.* — JEFFERSON: Mt. Vernon City Reservoir, 753; L. & N. Lake, Mt. Vernon, 752. PERRY: Du Quoin Reservoir, 611. PUTASKI: Cache River near Perks, 539. SALINE: Harrisburg North Reservoir, 586. WASHINGTON: Ashley City Reservoir, 631. WAYNE: In creek, 2 mi. S. of Keene, 732.

*Echinodorus cordifolius* (L.) Griseb.

The collection from Big Lake in Gallatin County denotes the first discovery of this aquatic from a southeastern border county.

*County records.* — ALEXANDER: Horse-shoe Lake, 531. GALLATIN: Big Lake, 2 mi. NE. of Old Shawncetown, 578. MASSAC: Mermet Swamp, 556.

*Sagittaria brevirostra* Mack. & Bush.

The collections from Massac, Pope, and Gallatin Counties are the first recorded stations from those counties adjacent to the Ohio River.

*County records.* — GALLATIN: Big Lake, 2 mi. NE. of Old Shawncetown, 577. MASSAC: Mermet Swamp, 1 mi. SW. of Mermet, 555. MONROE: More-dock Lake, N. of Valmeyer, 643. PERRY: Du Quoin Reservoir, 610. POPE: Lake Glendale, 2 mi. N. of Dixon Springs State Park, 562. WAYNE: Roadside ditch, 1 mi. N. of Wayne City, 731. WHITE: Roadside ditch, 3 mi. S. of Norris City, 702.

*Sagittaria calycinus* Engelm. Only three stations (St. Clair, Jackson, and Alexander Counties) were previously listed for this arrowhead in southern Illinois.

*County records.* — FRANKLIN: West Frankfort City Lake, 665 and temporary farm pond, 3 mi. N. of Thompsonville, 664. HAMILTON: Jay's Lake, SW. of McLeansboro, 685. JEFFERSON: Blufford Lake, 2 mi. SE. of Blufford, 751. PERRY: Pinckneyville Reservoir, 609. PUTASKI: Cache River bottoms, about 2 mi. S. of Perks, 538. RANDOLPH: Coulterville Reservoir, near Coulterville, 647. SALINE: Harrisburg North Reservoir, 585. WABASH: Farm pond, 4 mi. W. of Mt. Carmel, 707. WASHINGTON: Nashville Reservoir, 630.

*Sagittaria graminea* Michx. This is the first known station for this lowland species in the southeastern half of Illinois.

*County record.* — POPE: Lake Glendale, 561.

*Sagittaria latifolia* Willd. The common arrowhead inhabits the margins of lakes, farm ponds, and ditches.

*County records.* — MASSAC: Mermet Swamp, 554. MONROE: Gilmore Lake, 3 mi. S. of Columbia, 642. POPE: Lake Glendale, 560. RANDOLPH: Coulterville Reservoir, 648.

#### Hydrocharitaceae Aschers.

*Limnobium spongia* (Bosc) Steud. This floating species was previously described from swampy and stagnant

habitats in Union and Alexander Counties (Mohlenbrock, 1959). Southern Illinois is one of the northern range limits of this species, which is primarily restricted to the southeastern United States (Fernald, 1950).

*County records.* — MASSAC: Mermet Swamp near Mermet, 553. PULASKI: Cache River bottoms near Perks, 537.

#### Gramineae Juss.

*Leersia virginica* Willd. var. *ovata* (Poir.) Fern. This collection is a state record for variety *ovata*, but it falls within its reported range from Maine to Minnesota, south to Texas and Georgia. (Fernald, 1950).

*County record.* — WHITE: Roadside ditch, 3 mi. S. of Norris City, 701.

*Eriola latifolia* Michx. This species is quite common in the southern half of the state.

*County records.* — HAMILTON: Roadside ditch, 3 mi. N. of McLeansboro, 684. WAYNE: Roadside ditch, 3 mi. S. of Wayne City, 700.

#### Cyperaceae J. St. Hil.

*Bulbostylis capillaris* (L.) C. B. Clarke. The only species of *Bulbostylis* in Illinois has an even distribution (Mohlenbrock, 1963).

*County record.* — PERRY: Pinckneyville Reservoir, 607.

*Carex frankii* Kunth. Common.

*County record.* — FRANKLIN: Strip pit, 1 mi. W. of Zeigler, 663.

*Carex grayii* Carey. Wide distribution.

*County record.* — WHITE: Roadside ditch, 3 mi. S. of Norris City, 699.

*Carex lupuliformis* Sartw. This species has a sporadic distribution throughout Illinois.

*County record.* — FRANKLIN: Railroad embankment, 1 mi. N. of Zeigler, 662.

*Carex muhlenbergii* Schk. Very common.

*County record.* — WASHINGTON: Ashley City Reservoir, 629.

*Carex normalis* Mack. Previously, only four southern Illinois stations were listed as records.

*County record.* — FRANKLIN: Strip pit, 1 mi. W. of Zeigler, 661.

*Cyperus aristatus* Rottb. This species commonly inhabits moist stream banks.

*County record.* — WABASH: Wabash River, shoreline, at Mt. Carmel, 706.

*Cyperus erythrorhizos* Muhl. Common.

*County record.* — PERRY: Du Quoin Reservoir, 606.

*Eleocharis acicularis* (L.) Roem. and Schultes. Mohlenbrock and Drapalik

(1962) record this species from five counties in southern Illinois.

*County records.* — JEFFERSON: Jayco Lake, near Mt. Vernon, 750. MONROE: Gilmore Lake, 3 mi. S. of Columbia, 641. PERRY: Du Quoin Reservoir, 605. POPE: Lake Glendale, moist shoreline, 559. WAYNE: Fairfield Reservoir, 730 and roadside ditch, 3 mi. S. of Wayne City, 729. WHITE: Sandy Run Lake, 4 mi. S. of Norris City, 698.

*Eleocharis erythropoda* Steud. Localities in Wabash and Massac Counties represent the two previously known distributional records from southern Illinois.

*County records.* — HARDY: On the banks of Ohio River at Elizabethtown, 659. JACKSON: Lake Murphysboro, along shoreline, 502. WASHINGTON: Nashville Reservoir, 628.

*Eleocharis obtusa* (Willd.) Schultes var. *obtusa* (Roth) Drap. and Mohl. Jefferson County is now the only uncollected county in southern Illinois for this common species (Mohlenbrock and Drapalik, 1962).

*County records.* — RANDOLPH: Coulterville Reservoir, 647. SALINE: Harrisburg North Reservoir, 2 mi. E. of Galatia, 584. WASHINGTON: Ashley City Reservoir, 627.

*Panicum autumnalis* (L.) Roem. and Schultes. This amphibious species is commonly found around the moist shorelines of lakes and of streams.

*County records.* — EDWARDS: Moose Lake, 3 mi. N. of Albion, 717. HAMILTON: Temporary roadside ditch, 3 mi. N. of McLeansboro, 683 and Frey Lake, 1 mi. W. of Belle Prairie, 682. PERRY: Pinckneyville Reservoir, 604. RANDOLPH: Sparta Country Club Lake, 646.

*Scirpus cyperinus* (L.) Kunth. Common.

*County record.* — HAMILTON: Temporary roadside ditch, 3 mi. N. of McLeansboro, 681.

#### Lemnaceae Dumort.

*Lemna minor* L. This floating aquatic inhabits the shallow littoral of many lakes and swamps.

*County records.* — GALLATIN: Around the shore of Big Lake, 575. JEFFERSON: L. & N. Lake, Mt. Vernon, 747 and Bluford Lake, 746. PULASKI: Cache River bottoms, near Perks, swampy area, 536. SALINE: Floating among dense stands of *Typha*, Harrisburg North Reservoir, 583.

*Lemna perpusilla* Torr. This rare duckweed has a sporadic distribution

throughout Illinois. These two collections represent the third and fourth county records from southern Illinois. *County records.* — MONROE: Moredock Lake, near Valmeier, 640. WAYNE: In roadside ditch, 1 mi. E. of Fairfield, 728.

*Spirodela polyrrhiza* (L.) Schleid. The Gallatin location marks the first station from a southeastern border county. However, this species is fairly common and is recorded from most southwestern counties.

*County records.* — FRANKLIN: Strip pit, 1 mi. W. of Zeigler, 660. GALLATIN: Big Lake, N. of Shawneetown, 576. JEFFERSON: Bluford Lake, 2 mi. SE. of Bluford, 749 and L. & N. Lake in Mt. Vernon, 748.

*Wolffia papulifera* C. H. Thompson. This tiny aquatic was listed previously from Union and Alexander Counties. Franklin and Monroe localities represent the eighth and ninth collections from Illinois.

*County records.* — FRANKLIN: Plumfield Lake, 659. MONROE: Steppig Lake, near Columbia, 639.

#### Pontederiaceae Dumort.

*Heteranthera limosa* (Sw.) Willd. St. Clair County represented the only county record for this rare species in Illinois, where it was collected near East St. Louis in 1877, 1896, and 1947. (Jones and Fuller, 1955). The finding of this native of tropical America in Hardin County is quite surprising, because of its disjunct state distribution. However, mud plantain does exist within its previously reported United States range from Kentucky to Minnesota, south to New Mexico and Florida.

*County record.* — HARDIN: Temporary farm pond, Hwy. June, 146 and 1; 2 mi. N. of Cave-In-Rock, 568.

#### Juncaceae Vent.

*Juncus acuminatus* Michx. Widespread distribution throughout Illinois; fairly common.

*County records.* — EDWARDS: Along shoreline of Moose Lake, 3 mi. N. of Albion, 716. RANDOLPH: Coulterville Reservoir, 645.

*Juncus diffusissimus* Buckl. This uncommon species is restricted to the southern third of the state. Prior to this finding, it was collected in 1952 in Lawrence (County immediately north of Wabash) and in 1953 and

1956 from two stations in Jackson County (DeFilippis, 1964).

*County record.* — JEFFERSON: Moist soil around Mt. Vernon City Reservoir, 745.

*Juncus nodatus* Coville. Winterringer and Evers (1960) list this species from only five other localities in southern Illinois.

*County records.* — FRANKLIN: Benton Lake, 658. JEFFERSON: Jaycee Lake, N. of Mt. Vernon, 744. WAYNE: Fairfield Reservoir, 727.

#### Saururaceae Lindl.

*Saururus cernuus* L. Lizard's tail is locally abundant along moist shorelines and roadside ditches and has a wide range distribution.

*County records.* — JEFFERSON: Roadside ditch, 4 mi. S. of Mt. Vernon along Route 37, 743. WITTE: Sandy Run Lake, 4 mi. S. of Norris City, 697.

#### Salicaceae Lindl.

*Populus deltoides* Marsh. This lowland tree is found throughout the state.

*County record.* — JEFFERSON: Jaycee Lake, N. of Mt. Vernon, 742.

*Salix caroliniana* Michx. Being restricted to the lower half of the state, Jones and Fuller (1955) record this willow only from St. Clair and Madison (immediately north of St. Clair) Counties. *County record.* — JACKSON: Lake Murphysboro, 501.

*Salix nigra* Marsh. The black willow is now recorded in southern Illinois from all counties, except Hardin.

*County record.* — EDWARDS: Shale strip pit, ½ mi. S. of Albion, 715.

#### Betulaceae Agardh

*Betula nigra* L. River birch is restricted chiefly to the western and southern parts of Illinois.

*County record.* — GALLATIN: Big Lake, 2 mi. NE. of Old Shawneetown, 574.

#### Aristolochiaceae Blume

*Aristolochia serpentaria* L. This rare species, Virginia snakeroot, is primarily restricted to the southern half of Illinois.

*County record.* — PULASKI: Cache River bottom, near Perks, 535.

#### Polygonaceae Lindl.

*Polygonum coquimbium* Muhl. This scarlet-colored smartweed is very common and widely dispersed.

- County records.* — GALLATIN: Pounds Hollow Lake, 573. MASSAC: Mermet Swamp, 1 mi. SW. of Mermet, 552.
- Polygonum hydropiperoides* Michx. This species commonly grows either in wet soil or in water.
- County record.* — PERRY: Around strip pits on Du Quoin Fair Grounds, 603.
- Polygonum lapathifolium* L. This species is widely distributed throughout Illinois.
- County record.* — JOHNSON: Along shoreline of Vienna Reservoir, 543.
- Polygonum pennsylvanicum* L. Abundant.
- County records.* — PERRY: Pinckneyville City Reservoir, 602. WAYNE: Roadside ditch, 3 mi. S. of Wayne City, 726.
- Polygonum persicaria* L. Lady's thumb is commonly found growing in wet roadside ditches.
- County record.* — WHITE: Roadside ditch, 3 mi. S. of Norris City, 696.
- Polygonum sagittatum* L. This uncommon species is now known from nine southern Illinois counties.
- County records.* — EDWARDS: Moose Lake, 714. JEFFERSON: Bluford Lake, 741 and L. & N. Lake in Mt. Vernon, 746.
- Rumex verticillatus* L. Prefers moist conditions; common.
- County record.* — WAYNE: Moist creek bed, 2 mi. S. of Keene, 725.
- Cabombaceae** A. Gray
- Brasenia schreberi* Gmel. Only Wabash, Franklin, and Union localities were previously listed as distributional records; rare.
- County records.* — MASSAC: Mermet Swamp, 551. WILLIAMSON: Madison Pond, near Blairsville, 594.
- Cabomba caroliniana* A. Gray. Winteringer and Evers (1960) listed this submerged aquatic from a single Illinois station in Moses Lake, Franklin County. However, fanwort was collected in 1952 from Union County [Wolf Lake, near bridge to powder plant, Bailey & Swayne 2555 (SIU)] and in 1961 from Williamson County [Mine Pond 12 near Cambria, Dillard s.n. (SIU)]. The station in Mermet Swamp represents the fourth Illinois county record for this unusual species.
- County record.* — MASSAC: Mermet Swamp, 1 mi. SW. of Mermet, 550.

**Nelumbonaceae** Lindl.

*Nelumbo lutea* (Willd.) Pers. The American lotus is widespread and common-

ly found in the shallow waters of most of the older aquatic habitats in southern Illinois.

*County records.* — EDWARDS: Moose Lake, 3½ mi. N. of Albion, 713. FRANKLIN: West Frankfort City Lake, 657. JOHNSON: Roadside ditch, ½ mi. E. of Vienna along Hywy. 146, 540. MASSAC: Mermet Swamp, 549.

**Nymphaeaceae** DC.

*Nuphar advena* Ait. This emergent species is usually restricted to sheltered lake shores and to slow moving streams; common.

*County records.* — FRANKLIN: Strip pit, 1 mi. W. of Zeigler, 556. HAMILTON: Frey Lake, 1 mi. W. of Belle Prairie, 680. HARDIN: Temporary farm pond, 1 mi. W. of Hywy. Junc. 146 and J, 567. MASSAC: Mermet Swamp, 548. WHITE: Sandy Run Lake, 4 mi. S. of Norris City, 593.

**Ceratophyllaceae** A. Gray

*Ceratophyllum demersum* L. Coontail is primarily restricted to the western counties of southern Illinois; locally abundant.

*County records.* — JEFFERSON: Mt. Vernon City Reservoir, 739. PERRY: Du Quoin Fair Grounds, strip pits, 691. PULASKI: Cache River, S. of Perks, 524.

**Cruciferae** E. Juss.

*Rorippa sinuata* (Nutt.) Hitchc. In southern Illinois, this species usually inhabits moist river banks; sparse distribution.

*County record.* — HARDIN: Along the shore of the Ohio River at Elizabethtown, 566.

**Crassulaceae** DC.

*Penthorum sedoides* L. Ditch stonecrop is now known from all twenty-three southern counties, except Randolph.

*County records.* — EDWARDS: Moose Lake, 3½ mi. N. of Albion, 712. PERRY: Du Quoin Reservoir, 600. UNION: LaRue Swamp, ¼ mi. N. of Pine Hills Field Station, 503.

**Euphorbiaceae** J. St. Hil.

*Chamaesyce maculata* (L.) Small. Gallatin County is the only location in southern Illinois in which this common lowland plant is not now listed as a distributional record.

*County record.* — WHITE: Sandy Run Lake, 4 mi. S. of Norris City, 592.

## Hypericaceae Lindl.

*Hypericum multum* L. Fairly common in the southern half of the state. County record. — WAYNE: Roadside ditch, 1 mi. N. of Wayne City, 724.

## Lythraceae Lindl.

*Ammannia coccinea* Rottb. This species is, now listed as occurring in every southern Illinois county.

County records. — FRANKLIN: Moses Lake, 655 and Lake Benton, 654. JEFFERSON: Mt. Vernon Reservoir, 738. SALINE: Harrisburg North Reservoir, 582. WAYNE: Roadside ditch, 1 mi. N. of Wayne City, 723.

*Rotala ramosior* (L.) Koehne. Toothcup is widely distributed throughout the southern part of Illinois.

County records. — EDWARDS: Moose Lake, 3½ mi. N. of Albion, 711. HAMILTON: Roadside ditch, 3 mi. N. of McLeansboro, 679 and McLeansboro Reservoir, 678. JEFFERSON: Jaycee Lake, N. of Mt. Vernon, 737. PERRY: Pinckneyville Reservoir, 599. RANDOLPH: Coulterville Reservoir, 644. WAYNE: Fairfield Reservoir, 722.

## Onagraceae Dumort.

*Jussiaea decurrens* (Walt.) DC. This species is apparently restricted to southern Illinois where it is now recorded from eight counties.

County record. — GALLATIN: Pounds Hollow Lake, 572.

*Jussiaea diffusa* Forsk. Water primrose commonly inhabits lakes and farm ponds in this half of Illinois.

County records. — ST. CLAIR: Forest Park Inn Lake, 1 mi. NW. of Tilden, 636. WASHINGTON: Washington County Conservation Lake, 626. WHITE: Sandy Run Lake, 4 mi. S. of Norris City, 695. WILLIAMSON: Devil's Kitchen Lake, 591.

*Ludwigia alternifolia* L. Wide distribution; extremely common.

County records. — ALEXANDER: Temporary pond, 2 mi. W. of Tamms, 530. GALLATIN: Pounds Hollow Lake, 571. WASHINGTON: Nashville City Reservoir, 625.

## Haloragaceae Horan.

*Myriophyllum pinnatum* (Walt.) BSP. The main distribution of this aquatic is in the western half of Illinois. Winterringer and Evers (1960) list this species only from St. Clair and Ran-

dolph stations in southern Illinois; very rare.

County records. — PERRY: Pyatts strip pits, 598. WILLIAMSON: Pond, 2 mi. W. of Johnson City, 590.

## Primulaceae Vent.

*Lysimachia nummularia* L. Moneywort is commonly found around the damp shorelines of lakes and ponds.

County records. — JEFFERSON: L. & N. Lake in Mt. Vernon, 736. WASHINGTON: Ashley City Reservoir, 624.

## Asclepiadaceae Lindl.

*Asclepias incarnata* L. Swamp milkweed inhabits moist soils; wide Illinois distribution.

County record. — ALEXANDER: In moist shoreline soil around Horseshoe Lake, 596.

## Convolvulaceae Vent.

*Cuscuta cuspidata* Engelm. The Perry station represents the sixth collection from southern Illinois.

County record. — PERRY: Du Quoin Reservoir, 597.

## Labiatae Juss.

*Lycopus americanus* Muhl. This common herb is abundant in all parts of the state; it has now been collected from every southern Illinois county.

County records. — HAMILTON: McLeansboro Reservoir, 769. JOHNSON: Swamp along Hwy. 146, ½ mi. E. of Grantsburg, 786. PERRY: Strip pits located on Du Quoin Fair Grounds, 773.

*Lycopus virginicus* L. This species is sparsely distributed in southern Illinois.

County records. — FRANKLIN: Lake Benton, along moist shoreline, 653. JEFFERSON: L. & N. Lake in Mt. Vernon, 735. WHITE: Sandy Run Lake, 694.

## Scrophulariaceae Lindl.

*Bacopa rotundifolia* (Michx.) Wettst. This species is not uncommon in the southern tip of the state, but it becomes increasingly sporadic in occurrence to the north.

County records. — PULASKI: Moist roadside ditch, 2 mi. N. of Albion, 533. WILLIAMSON: Devil's Kitchen Lake, 589.

*Gerardia guttingeri* Small. This species has a scattered distribution in the

northern two-thirds of Illinois, but it is more frequent in occurrence in the southern end of the state.

*County records.* — HAMILTON: Temporary roadside ditch, 3 mi. N. of McLeansboro, 677. PERRY: Lake Salateeska, N. of Pinckneyville, 596. PULASKI: Cache River, near Perks, 582.

*Gratiola neglecta* Torr. This species, which inhabits the moist margins of ponds and lakes, has now been discovered in all but three counties in southern Illinois.

*County records.* — GALLATIN: Pounds Hollow Lake, 768. WASHINGTON: Nashville City Reservoir, 623.

**Acanthaceae** J. St. Hil.

*Ruellia pedunculata* Torr. The range of this coastal species is restricted to the southern third of the state, which represents the northern limit of its southern distribution (Fernald, 1950).

*County record.* — WASHINGTON: Washington County Conservation Lake, 622.

**Lentibulariaceae** Lindl.

*Utricularia gibba* L. In Illinois, this bladderwort is confined to the western and southern borders of southern Illinois and to the extreme northeast corner of the state. The apparent gaps in range throughout eastern and central portions of the state probably are attributable to the lack of suitable semi-stagnant, aquatic habitats.

*County record.* — MASSAC: Mermet Swamp, 1 mi. SW. of Mermet, 547.

*Utricularia vulgaris* L. This submerged aquatic has a sporadic distribution in Illinois and has previously been reported from only two southern stations located in St. Clair and Union Counties.

*County record.* — MASSAC: Mermet Swamp, 1 mi. SW. of Mermet, 546.

**Bignoniaceae** Pers.

*Campsis radicans* (L.) Seem. Collections of the trumpet-creeper are now recorded from twenty of the twenty-three southern Illinois counties.

*County record.* — PERRY: Pickneyville Reservoir, 595.

**Rublaceae** B. Juss.

*Cephalanthus occidentalis* L. Buttonbush is quite common around the shores of most aquatic habitats. It is now

known from all twenty-three of the southern counties.

*County record.* — GALLATIN: Big Lake, 2 mi. NE. of Old Shawneetown, 570.

**Compositae** P. F. Gmel.

*Bidens comosa* (A. Gray) Wieg. Beggar-ticks inhabit moist lowlands throughout the state; it is now known from nine southern Illinois counties.

*County record.* — WAYNE: Fairfield Reservoir, 721.

*Bidens frondosa* L. Widespread Illinois distribution.

*County record.* — EDWARDS: Moose Lake, 3½ mi. N. of Albion, 709 and shale strip pit, ½ mi. S. of Albion, 708.

*Bidens polylopha* Blake. This species occurs throughout Illinois, but it appears to be most abundant in the southern fourth of the state.

*County record.* — WASHINGTON: Nashville Reservoir, 621.

*Bidens vulgata* Greene. Sporadic distribution throughout southern Illinois; not common.

*County record.* — EDWARDS: Moose Lake, 3½ mi. N. of Albion, 710.

*Mikania scandens* (L.) Willd. Climbing hempweed is known to extend into Illinois as far north as Lawrence County (immediately north of Wabash County). The Franklin County record represents the sixth Illinois station.

*County record.* — FRANKLIN: Strip pit, 1 mi. W. of Zeigler, 652.

*Xanthium commune* Britt. Widespread distribution in Illinois.

*County records.* — HAMILTON: McLeansboro Reservoir, 676. WHITE: Wabash River at Grayville, 693.

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