

BROOD X -- 17-Year Cicadas (*Magicicada*)

SUMMARY OF VOUCHER-CONFIRMED SPECIES LOCALITIES \*

Thomas E. Moore, 2006 (revised 3/16/06)

**CANADA**

**Quebec--LABELLE Co.:** Montebello, June 1885, *septendecim*.

**UNITED STATES**

**Delaware--KENT Co.:** Camden, 11 July 1933, *septendecim* (Brood X-1936 straggler?). **NEW CASTLE Co.:** Newark, 27 May-5 June 1936, 18 May-15 June 1953, *septendecim*, 17, 18, 27 May 1953, June 1953, 15 June 1953, *septendecim* (Zyla)

**District of Columbia--**Washington, June 1885, 25 May 1902, *septendecim*, 2-18 June 1902, *septendecim*, *septendecula*, 25 May-1 June 1919, 12 May 1953, 16 June 1953, *septendecim*; 8 April 1835, *septendecim* (Brood X-1834 straggler?).

**Georgia--BANKS Co.:** Lula, 14 May 1953, *septendecim*; south of Lula, along US-23, 28 May 1987, *septendecim*. **FANNIN Co.:** Morgantown, June 1885, *cassini*, *septendecula*; along GA-60 between McCaysville and Mineral Bluff, 28 May 1987, *septendecim*; at Fannin Co. line along US-76, 28 May 1987, *septendecim*, *septendecula*. **GILMER Co.:** just east of Ellijay along US-76, 28 May 1987, *septendecim*; along US-76 at Murray Co. line, *septendecim*. **HALL Co.:** Gainesville, 17 May 1936, 14-16 May 1953, *septendecim*; along US-23 near Hall Co. Stadium, north of Gainesville, 28 May 1987, *septendecim*. **LUMPKIN Co.:** 4.1 miles north of Dawson Co. line on U.S.-23, 17 May 1953, *septendecim*; along GA-52, near river & intersection of US-19, 5 mi. southeast of Dahlonega, & just northwest of Dahlonega along US-19, 28 May

1987, *septendecim*. **MURRAY Co.:** 1970, *septendecim*, *septendecula* (Lloyd and Dybas, 1974); along US-76 near Gilmer Co. line, 28 May 1987, *septendecim*, *septendecula*. **UNION Co.:** along US-19 & US-76, on both sides of Blairsville, 28 May 1987, *septendecim*; junction of US-19 & GA-325, just north of US-76, opposite small frame church just north of an open sawmill, about 10 mi. southeast of Morgantown & 16 mi. southeast of Blue Ridge, *septendecim*, *septendecula*.

**Illinois--CLARK Co.:** Rocky Branch, 12 June 1953, *septendecim*, *cassini*, *septendecula*; heading west along I-70 before Marshall and the IL-1 exit, a half mile east of the exit to US-40 west, 13 June 1987, *septendecim*, *cassini*, *septendecula*; just before and at the first rest area in IL along I-70, and at the I-70 exit to IL-1 and north of it on IL-1, *septendecim*, *cassini*. **COLES Co.:** Charleston, 27 June 1953, *cassini*. **EDGAR Co.:** Foley's Woods, 7 June 1953, *cassini*; Paris 1956 (Brood X-1953 straggler?), *septendecim*; Vermilion (6-8 miles east), 27 May 1953, *septendecim*, *cassini*; 1 April 1956 (Brood X-1953 straggler?), species unknown (nymph); 1987, *septendecula*; 4 mi. north of the Clark Co. line on IL-1, 13 June 1987, *septendecim*, *cassini*, *septendecula*. **PIATT Co.:** near White Heath, 1936, 1953, 1970, *septendecim*, *cassini* (Alexander). **VERMILION Co.:** Muncie, 10 June 1919, *septendecim*; Oakwood, 21 May 1953, *septendecim*, *cassini*.

**Indiana--BARTHOLOMEW Co.:** 1970, *septendecim*, *cassini* (Young). **BROWN Co.:** Brown Co. State Forest, 7 June 1953, *septendecim*, *cassini*; 1970, *septendecim*, *cassini*, *septendecula* (Young). **CLARK Co.:** 1970, *septendecim*, *cassini* (Young). **CLAY Co.:** 1970, *septendecim*, *cassini* (Young); along I-70 just before the Stearley Garage Rd., about Mile 27, 13 June 1987, *septendecim*, *cassini*, *septendecula*. **CRAWFORD Co.:** along I-64 in easternmost

part of county, and nearly continuously west across county along I-64, 12 June 1987, *septendecim, cassini, septendecula*; just before exit to IN-145 along I-64, 12 June 1987, *septendecim, cassini, septendecula*. **DAVISS Co.:** 1970, *septendecim, cassini* (Young); just north of the Martin Co. line along US-231, a little north of the junction with IN-645, 13 June 1987, *septendecim, cassini*. **DEARBORN Co.:** 1970, *septendecim, cassini* (Young).

**DECATUR Co.:** 1970, *septendecim, cassini* (Young). **DE KALB Co.:** east of IN-1 and close to the intersection of Co. Rds. 73 & 8, 23 June 1987, *septendecim*; about a half mile west of Co. Rd. 79, about 3 miles north of the prior record of this date, & along Co. Rd. 77 north of Co. Rd. 4A, at the northern end of the loop of Co. Rd. 77, 23 June 1987, *septendecim*. **DUBOIS Co.:** 1970, *septendecim, cassini, septendecula* (Young), along I-64 heading west, just entering the county, 12 June 1987, *septendecim, cassini, septendecula*. **FLOYD Co.:** 1970, *septendecim, cassini* (Young), junction of US-150, IN-62, & I-64, 12 June 1987, *septendecim, cassini, septendecula*. **FOUNTAIN Co.:** Covington, 15 June 1885, *septendecim*. **FRANKLIN Co.:** Brookville, 4 December 1885, *septendecim, cassini*. **GREENE Co.:** 1970, *septendecim, cassini, septendecula* (Young); along US-231 north of the junction with IN-45/58, 13 June 1987, *septendecim, cassini, Massospora cicadina*. **HARRISON Co.:** along I-64, about Mile 96 just east of the Crawford Co. line, 12 June 1987, *septendecim, cassini, septendecula*. **HENDRICKS Co.:** 1970, *septendecim, cassini* (Young). **JACKSON Co.:** 1970, *septendecim, cassini, septendecula* (Young). **JEFFERSON Co.:** Madison, 2 June, 22 June 1953, *cassini*; 1970, *septendecim, cassini, septendecula* (Young); IN-56, 2 mi. east of Madison north of Little Doe Rd., 1 June 2004, *septendecim, cassini, cassini* laying eggs (Lakes-Harlan). **JENNINGS Co.:** 1970, *septendecim, cassini* (Young). **JOHNSON Co.:** 1970, *septendecim, cassini* (Young). **LAWRENCE Co.:** 1970, *septendecim, cassini* (Young). **MARION Co.:** 25 May 1902,

*septendecim, septendecula*, 3 June 1937 (Brood X-1936 stragglers?), *cassini, septendecula*.

**MARTIN Co.:** 1970, *septendecim, cassini* (Young); east of Loogootee along US-50/150, just before the marker by the 4-H grounds & about 2 miles east of the junction with US-231 north, and along US-231 a mile or two north of Loogootee, 13 June 1987, *septendecim, cassini*; along the road north of the lake north of Loogootee & just south of Bramble, 13 June 1987,

*septendecim, cassini*. **MONROE Co.:** Bloomington, 1902, *septendecim, cassini*, 30 May 1930, *septendecim* (Brood X-1936 straggler?), 10 June 1934, *septendecim* (Brood X-1936 straggler?), 15-30 May 1936, *septendecim, cassini, septendecula*, 2 June 1953, *septendecim, cassini*, 16 May 1987, *septendecula*, I.U. campus area, 5, 19, 23 May 1987, *septendecim, septendecula*; I.U.

campus areas, 2 June 1966, species unknown, 24 May 1966, 29 May 1967, *septendecim* (Brood X-1970 stragglers?) (Young), 21 May 1968, *septendecula* (Brood X-1970 straggler?) (Young), May-June 1970, *septendecim, cassini, septendecula* (Young). **MONTGOMERY Co.:** Shades State Park, 29 June 1919, *septendecim*.

**MORGAN Co.:** 1970, *septendecim, cassini* (Young).

**ORANGE Co.:** 1.5 miles North of Paoli, 24 May 1919, *septendecim*; 1970, *septendecim,*

*cassini, septendecula* (Young). **OWEN Co.:** 1970, *septendecim, cassini*, (Young); Hoot Woods,

5 miles off Highway 231 on Hoot Rd, 21 May 1987, *septendecim* (Cooley et al. 2001); along US-

231 from a little north of the county line to Freedom, a mile or two northeast of freedom, and at

entrance to McCormick's Creek State Park near Spencer, 13 June 1987, *septendecim, cassini,*

*septendecula*. **PARKE Co.:** Turkey Run State Park, 26 May 1953, *septendecim, cassini*, 28-29

May 1970, *septendecim, cassini, septendecula*; 1970, *septendecim, cassini* (Young). **PERRY**

**Co.:** 1970, *septendecim, cassini* (Young); Exit 790 off I-64 & along IN-37, 12 June 1987,

*septendecim, cassini, septendecula*. **PIKE Co.:** 1970, *septendecim, cassini* (Young).

**PUTNAM Co.:** 1970, *septendecim, cassini* (Young); north of Cloverdale and just south of I-70

along US-231, 13 June 1987, *septendecim*, *cassini*, *septendecula*. **RIPLEY Co.:** May 1936, *septendecim*, *cassini*; 1970, *septendecim*, *cassini* (Young). **RUSH Co.:** Arlington, 15 June 1885, *septendecim*. **SCOTT Co.:** 1970, *septendecim*, *cassini* (Young). **STEUBEN Co.:** along Belfountain Rd. near Fire Lane 19, close to Hamilton Lake and near the town of Pleasant lake, 23 June 1987, *septendecim*; just south of IN-120 along the extension of Territorial Road from MI, east of Clear Lake, 15 June 2004, *septendecim*. **SWITZERLAND Co.:** along Ohio River 3 mi. west of Markland along IN-56, at Vevay, 1 June 2004, *septendecim*, *cassini* (Lakes-Harlan). **TIPPECANOE Co.:** May 1936, *septendecim*; Soldier's Home, 1 June 1936, *septendecim*, *cassini*, *septendecula*. **VIGO Co.:** 1970, *septendecim*, *cassini* (Young); West Terre Haute along I-70, near St. Mary's of the Woods College access Rd. exit, about Mile 3, 13 June 1987, *septendecim*, *cassini*, *septendecula*. **WARRICK Co.:** 1970, *septendecim*, *cassini* (Young); at Mile 45 along I-64, 12 June 1987, *septendecim*. **WASHINGTON Co.:** 1970, *septendecim*, *cassini* (Young); north of Palmyra, 28 May 1987, *cassini*.

**Kentucky—BOONE Co.:** along KY-8 near Ohio River between Taylorsport and Ft. Thomas, 8 June 1987, *septendecim*, *cassini*, *septendecula*; at first exit west of junction of I-75 & I-71, 12 June 1987, *cassini*; along Ohio River 3 mi. west of Markland along IN-56, at Vevay, 1 June 2004, *septendecim*, *cassini* (Lakes-Harlan). **CAMPBELL Co.:** Fort Thomas, 8 May 1919, *cassini* *septendecula*, 16 April 1987 *cassini* nymphs, 9 June 1987, *septendecim*, *cassini*, *septendecula*; along KY-8 near Ohio River between Taylorsport and Ft. Thomas, 8 June 1987, *septendecim*, *cassini*, *septendecula*; US-27 at jct. with KY-154 and near Claryville and Alexandria, 1 June 2004, *cassini* (Lakes-Harlan). **CARROLL Co.:** along KY-227 north of I-71, near General Butler State park & Carrollton, *cassini* and *Massospora cicadina*; KY-227 north of I-71, General Butler State Park, 1 June 2004, *septendecim*, *cassini* (*cassini* laying eggs); KY-36

near Prestonville, 1 June 2004, *cassini* (Lakes-Harlan). **FRANKLIN Co.:** US-421 3 mi. north of Frankfort, junction of KY-1665, 31 May 2004, laying eggs, *cassini* (Lakes-Harlan).

**GALLATIN Co.:** at Exit 62 off I-71, along US-127, 12 June 1987, *cassini*; KY-455, north of I-71, along KY-42 at Ohio River near Warsaw, 1 June 2004, *cassini* (Lakes-Harlan). **GRANT**

**Co.:** 1970, *septendecim*, *cassini*, *septendecula* (Lloyd & White, White and Lloyd); KY-491 near Crittenden, 1 June 2004, *cassini* (Lakes-Harlan) **HARRISON Co.:** 1970, *septendecim*, *cassini*,

*septendecula* (Lloyd & White); species unknown (White and Lloyd). **HENRY Co.:** 1970, species unknown (Young); just north of Pendleton, off I-71, 12 June 1987, *cassini*; KY-421, just north of Franklin Co., near junction with KY-561, 31 May 2004, *cassini* (Lakes-Harlan).

**JEFFERSON Co.:** Louisville, 25 May 1902, *septendecim*; two miles before the Zorn Ave. Exit along I-71, in powerline right-of-way, 12 June 1987, *cassini*, Riverwood and Greenleaves-

Pendartial and Greenwood areas off Zorn Rd., 12 June 1987, *cassini*. **KENTON Co.:** along KY-8 near Ohio River between Taylorsport and Ft. Thomas, 8 June 1987, *septendecim*, *cassini*, *septendecula*; Devon Park, Covington, 9 June 1987, *septendecim*, *cassini*, *septendecula*.

**NICHOLAS Co.:** 1970, *septendecim*, *cassini*, *septendecula* (Lloyd & White), species unknown (White and Lloyd). **OWEN Co.:** 1970, *septendecim*, *cassini*, *septendecula* (Lloyd & White),

species unknown (White and Lloyd). **PENDLETON Co.:** Demossville, 26 May 1902, *cassini*, *septendecula*; KY-491 near Gardensville (also called Gardnersville) and at junction of KY-17

near Butler, 1 June 2004, *cassini* (Lakes-Harlan). **TRIMBLE Co.:** 1970, species unknown (Young); KY-36 east of Milton and in Milton, 1 June 2004, *cassini* (Lakes-Harlan). **Co.**

**UNKNOWN:** 1936, *septendecim*.

**Maryland— ALLEGANY Co.:** Green Ridge State Forest, collected dead, 20 June 2004, *septendecim* (McGinnis/Lankalis). **ANN ARUNDEL Co.:** Annapolis, 25 May 1987,

*septendecim*, 5, 11, 15, 17 June 1987, *septendecula*.. **BALTIMORE Co.:** Baltimore, 4 June 1868, *cassini*, 24-25 May 1970, *septendecim*, *cassini*; Catonsville, 18 June 1902, *septendecim*. **CECIL Co.:** Elk Neck, Camp Rodney, 6 June 1987, *septendecim*; Northeast, 7 June 1953, *septendecim*. **FREDERICK Co.:** Sugarloaf Mountains, 20 June 1936, *septendecim*; Thurmont, 1936, *septendecim*. **HARFORD Co.:** Belair, 1902, *septendecim*. **MONTGOMERY Co.:** Ave., June 1970, *septendecim* (Zyla); Brookside Nature Center, June 1987, *septendecim*; Cabin John Bridge, 7 June 1902, *cassini*; Plummers Island, 8 June 1919, *septendecim*, *cassini*; McCoy area (small brood), 18 May 1999 *cassini* (Brood X-2004 straggler?) (Zyla); Silver Spring, 15 May 1936, 21 May 1953, June 1953, *septendecim*, 3 June 1987, *septendecim* (Zyla); Wheaton, 20 May 2000 *septendecim* (Brood X-2004 stragglers ?) (Zyla). **PRINCE GEORGES Co.:** Beltsville, 25 May 1919, *septendecim*, 22 June 1970, 1987, *septendecim* (Zyla); Bladensburg, June 1919, *septendecim*, 1919, *cassini*; Bowie, 27 May 1987, *cassini* (Zyla); Clinton, June 1971, *septendecim* (Brood X-1970 straggler?) (Zyla); Hyattsville, 10 May 1953, *septendecim*; Laurel, 30 May 1919, *septendecim*, 8 June 1971, *septendecim* (Brood X-1970 straggler?) (R.C. Froeschner, in litt.); Takoma Park, 6 June 1936, *septendecim*. **WASHINGTON Co.:** South Mts., near Pine Knob, 17 June 1919, *septendecim*.

**Michigan—BRANCH Co.:** along Southern Road just before Ray Quincy Road, south of California, southeastern corner of the county, up high between Ray Quincy and Delmar roads, heard a very small population, 15 June 2005, *septendecim*; on DuQuid Road, about a mile south of Southern Rd., 15 June 2004, got a voucher (a wing, only) for this very sparse population, *septendecim*. **CALHOUN Co.:** Battle Creek, 17 June 1902, *septendecim*. **GENESEE Co.:** Grand Blanc, 9 June 1936, *septendecim*. **HILLSDALE Co.:** a mile or two east of M-49 along Territorial Road, 15 June 2005, *septendecim*; at the edge of Montgomery, east of the south edge

of town almost to Grant Road, 15 June 2004, *septendecim*; south of IN-120 on MI-49, in sight of the Ohio line, 15 June 2004, *septendecim*. **KALAMAZOO Co.:** Cooper, 17, 18 June 1902, *septendecim*; Richland, August 1919, *septendecim*. **LENAWEE Co.:** Adrian, 24 June 1919, June 1987, *septendecim*; Shepherd Rd. north of Adrian, west of M-52 and south of M-50, woodlot just west of golf course, 8 June 1987, *septendecim*; Clinton, 17, 22 June 1919, *septendecim*; Raisin Twp., along M-52 a little north of Gady Rd. and about 1 mile north of Sutton Rd. and Birdsall, near Raisin Valley Estates Trailer Park, 8 June 1987, *septendecim*.

**LIVINGSTON Co.:** Hamburg, 22 June 1919, June 1987, *septendecim*. **OAKLAND Co.:** 15-16 June 1919, 23 May 1936, *septendecim*; Bloomfield Hills, June 1953, 21 June 1987, *septendecim*. **WASHTENAW Co.:** 7, 14 June 1919, 22 June 1936, *septendecim*; Ann Arbor City, 10, 12 June 1902, 26 June 1921 (Brood X-1919 straggler?), *septendecim*, 12 May-30 June 1936, *septendecim*, one *cassini*, 9, 14-15 June 1953, 19 August 1970 (seasonally late emerger or dead on ground?), (Toomey Woods [*sic*=Tuomy]), 14 June 1919, (Eberwhite Woods), 21 June 1936, *septendecim*; **Ann Arbor Township**--Dixboro and Joy Roads, 13 June 1936, Goss Road Woods, 18 June 1970, June 1987, north shore of Barton Pond, 14 June 1919, 25 June 1987, upper Barton Hills Rd., Ford Rd., Goss Rd., Maple Rd., and Westridge Rd., 25, 31 May 1987, end of Green Rd. near Burbank Rd, 31 May 1987, along Earhart Rd. north of Warren Rd. and south of Joy Rd., 2 June 1987, along Ford Rd. near Domino Farms and at Horner Woods, 21 April 1987 (nymphs at soil surface), 31 May 1987, on all sides of Stein Rd. and Maple Rd. and along Stein Rd. north of Barton Hills, at intersection of Stein Rd., & Whitmore Lake Rd., 2 June 1987, along Warren Rd. just east of Whitmore lake Rd. and between Earhart Rd. and Dixboro Rd., 2 June 1987, *septendecim*; 29 May 2004, Bill Casello emails Domino Farms Petting Farm has large number of *septendecim* singing (also on 12 June); 16 June 2004, cicadas singing in

numbers in Barton Hills, Washtenong Memorial Gardens on Whitmore Rd., Stein Rd., north Maple Rd., Joy Rd., *septendecim*; **Lodi Township**--Sec. 14, north of Pleasant Lake and west of Wagner Rd., 2 June 1987, southwest corner of the intersection of Waters Rd. with Wagner Rd. and of the intersection with Tessmer Rd., 1987 (Casello), *septendecim*; **Northfield Township**--Tobin Lake, at end of Buckland Rd., 2 July 1987, along both sides of Hellner Rd. from Northfield Church Rd. to North Territorial Rd., June 1987, along Sutton Rd. between North Territorial Rd. and Northfield Church Rd., about a half mile west of Sutton Rd. and about a half mile north of 5 Mile Rd, south of 7 Mile Rd. and east of Spencer Rd., 1987 (Casello), *septendecim*; **Pittsfield Township**--N. Ypsilanti Airport, 10 June 1932, *septendecim* (Brood X-1936 straggler?); **Scio Township**—25 June 1987, Tubbs Rd., North Delhi Rd., 25, 31 May, 1987, Stein Rd. west of Maple Rd., Craig Rd. between Wagner Rd. and Maple Rd., both sides of Liberty Rd. just west of Wagner Rd., on both sides of M-14 west of Maple Rd. and at the edge of Ann Arbor City, 2 June 1987, along the RR tracks and at the edge of Delhi Metropolitan Park near the Huron River, along East Delhi Rd. and West Delhi Rd. about a quarter mile north of Miller Rd., 25 June 1987, *septendecim*, North Delhi Rd., Sec. 2, 15 June 1987 *septendecim*, , 31 May 2000, lone male singing in morning, *septendecim* (Brood X-2004 straggler ?), 30 Aug. 2003, *septendecim* (seasonally late-emerging stragglers of Brood X-2004 ?); one or two cicada tunnels seen under logs along Tubbs Rd., 28 March 2004; 10 April 2004, many cicada holes in soil along Tubbs. Rd, and 2" depth soil temp. 54° F., some holes under or near the sides of logs have open-top beginnings of turrets, but no turrets seen in the open, no nymphs seen in burrows—but it was after the peak sunlight and warmth of the day; 15 April 2004, checked Tubbs Rd. site again late in the day, one tube in the open seen, without turret, several burrows under logs had short turrets started, but some tunnels were without, soil temp. at 2" was 55°F; 25

April 2004, soil temp. 57°F. at 2" depth at same site, more tunnels at surface and more mud turrets than before, but no nymphs at soil surface about 6:45 PM; 2 May 2004, soil temp. 51°F., got nymph at soil surface, many more holes open to the surface and more turrets and more complete turrets at same place; 5 May 2004, at same Tubbs Rd. site, more tunnels and turrets at surface, some turrets in open, but most and tallest ones under logs or at sides of logs, saw several nymphs at the surface, collected two male and two female nymphs, none darkened as they will be when ready to emerge, soil temp. down to slightly less than 50°F; 9 May 2004, checked same Tubbs Rd. site again, no cicadas seen at surface, but soil temp. at 2" was just barely below 60°F; 10 May 2004, heavy rain at times in the night of the 9<sup>th</sup>, 1.8 inches total, two nymphs seen out of their burrow, must have been a warm rain, they are just beginning to show change of color—reddish is showing through the nymphal skeleton at bases of wings and slightly in eyes, at noon the soil temp. at 2" near where the two nymphs were seen on the soil surface is 66°F. (holes closed over with mud, now (they had been placed them back in their burrows, head up), at other places in more direct sun in the Tubbs Rd. woods the soil temp. was 70°F; 11 May 2004, soil temp. at midnight was 64°F., air temp. was 70°F; 12 May 2004, soil temp. at 6:00 PM in Tubbs Rd. woods was 68°F., air temp. was over 80°F., most tunnels closed over, few nymphs at surface but beginning to darken a little more—none ready to emerge; 14 May 2004, at 7:00 AM under a tree the soil temp. was 65°F; 15 May 2004, an inch of cold rain last night, low near 40°F.; at 3:00 PM air temp. about 53°F and soil temp. at 2" beneath tree is just below 60°F., no nymphs found at surface, many tunnels and turrets filled in with fresh-looking mud; 17 May 2004, air temp at 2:40 PM 72°F., soil temp. under tree with mottled sunlight patches 63°F, just before thunderstorm and rain rolled in; 18 May 2004, at 12:30 PM air temp was 74°F. and soil under tree was 67°F., later in the afternoon found several open tunnels near a big white oak tree, and

found one male periodical cicada nymphal skeleton from which an adult had emerged, thought we saw an adult periodical cicada fly by, found a few nymphs at the surface under logs, one of the three nymphs had begun to darken at the back of the head there in the forest, at 10:30 PM the air temp. had dropped to 62°F., soil temp. at this time at home was 65°F., no sign of more cicadas emerging; 19 May 2004, at 2:00 PM air temp. 69°F., soil temp. under tree 63.5°F., at 4:15 few cicadas at surface at Tubbs Rd. site, and these not darkened yet, and no cast skins seen or adults heard or seen, but lots of tunnels and turrets seen; air temp. 69°F. & soil temp. 61°F; 20 May 2004, at 2:20 PM at the Tubbs. Rd. site the air temp. was 76°F. and the soil temp. was 61°F; a few nymphs were at the surface but none seemed dark enough to be ready to emerge tonight, warm night with low atmos. pressure and impending thunderstorm; 72°F at 10:30 PM for the first time in a couple of weeks; 16 June 2004, cicadas singing in numbers on Tubbs Rd., in Loch Alpine subdivision, and on North Delhi Rd., *septendecim*; **Superior Township**--Frains Lake, 22 June 1919, south of Warren Rd. between Dixboro and Vorhies Rds. and about a half mile east of Vorhies Rd., on Vorhies Rd. about a half mile south of Warren Rd, 31 May 1987, along Cherry Hill Rd. about 1 mile east of Gale Rd., intersection of Ford Rd. and Napier Rd., June 1987, north of Ford Rd. about a half mile west of Gotfredson Rd., May-June 1987 (Casello), along Ford Rd. at Napier Rd. (near western edge of Wayne Co.), north of Warren Rd. at intersection with Frains Lake Rd., along M-14 in Sections 7 and 8 and at exit to Ford. Rd. in Sec. 9, along Dixboro Rd. in Sec. 18, along Frains Lake Rd. and near Dixboro Village south of Plymouth Rd., north of Vreeland Rd. between Gale Rd. and Hackman Rd. in Sec. 19, 1987 (Casello), *septendecim*; along Vorhies Rd., south of Warren Rd., June 2000, sizeable emergence of stragglers of 2004 Brood, *septendecim*; 24 May 2004, Alan Francis Pickett emails that there is a lot of cicada activity in the Cherry Hill Nature Preserve, east of the Matthaei Botanical Gardens, and Mark O'Brien emails

that many periodical cicadas have emerged west of the Matthaei Botanical Gardens and at the edge of the MBG prairie, *septendecim*; 30 May 2004, Bill Casello reports that Oak Trails Montessori School, Warren Rd., nr. Curtis and Plymouth rds, cicadas singing in numbers (also on 13 June), *septendecim*; 16 June 2004, cicadas singing in numbers on Cherry Hill Rd., and on Warren Rd., *septendecim*; **Webster Township**--along Webster Church Rd., a half mile north of North Territorial Rd., and about a half mile north of Joy Rd., 2 July 1987, along both sides of Webster Church Rd. for about a half mile beginning about a quarter mile north of North Territorial Rd. and at about a half mile south of Farrell Rd., along Jennings Rd., from Northfield Church Rd. to north Territorial Rd., along Northfield Church Rd from Jennings Rd. to Old Whitmore Lake Rd., along Old Whitmore Lake Rd. from Northfield Church Rd. to North Territorial Rd., along Maple Rd. just north of Northfield Church Rd., 1987 (Casello), *septendecim*.; **Ypsilanti Township**—Wiard Apple Orchard south of Merritt Rd. a little way west of Stony Creek Rd, late May 1987 (emergence holes only; Casello), species unknown.

**New Jersey--ESSEX Co.:** Orange Mts., 1919, *septendecim*. **HUNTERDON Co.:** Lambertville, 9 June 1936, *septendecim*, *cassini*, *septendecula*. **MERCER Co.:** Hopewell, 11 June 1970, *septendecim*; Princeton, June 1902, *septendecim*, *cassini*, 30 May 1936, *septendecim*, (west, between Mt. Rise and Rosedale), 19 June 1936, *septendecim*; west of Hopewell, 19 June 1936, *septendecim*, *septendecula*.

**New York--NASSAU Co.:** Massapequa, Long Island, 4-17 June 1936, *septendecim*.; 1902, 1918 (Brood X-1919 stragglers?), 1919, 1936, 1970, *septendecim* (Simon & Lloyd). **NEW YORK Co.:** New York City, 1 April 1851, 15 June 1851, *septendecim*. **ORANGE Co.:** 3 mil. East of Port Jervis along I-84, 2-7 July 1987, species unknown. **RICHMOND Co.:** Staten

Island, 12 May 1902, 16 June 1919, *septendecim*. **SUFFOLK Co.:** Babylon, Long Island, 17-28 June 1936, *septendecim*; Mastic, Long Island, 1919, 23 June 1953, *septendecim*; Patchogue, Long Island, 17 June 1936, *septendecim*; Ronkonkoma, 26 June 1936, *septendecim*.

**North Carolina—CHEROKEE Co.:** along US-64/74, and Wolf Creek Corners, 27 May 1987, *septendecim*..

**Ohio—DEFIANCE Co.:** Along OH-15 a little south of Defiance almost to Mansfield Rd. and a creek, and on Mansfield Rd. west of OH-15 and east of OH-15 to Hill Rd, and on to beyond Hoffman Rd. and the woods by the telecommunication tower east of Harris Rd., in the woods near Hoffman and highland Center Rds. and west of Porter Rd., and at Cullen Rd. where it goes north from Hoffman Rd. and the trailer park there, and along Porter Rd. to Dresher Rd., 8 June 1987, *septendecim, cassini*; just west of OH-15 south of Defiance and east of Schubert and Mansfield Rds., a mile east of Paulding Co., 23 June 1987, *septendecim, cassini*; OH-15, just north of Putnam Co., 2 June 2004, *cassini* (Lakes-Harlan). **DELAWARE Co.:** June 1953, *septendecim, cassini, septendecula*. **FRANKLIN Co.:** Columbus, 28 May 1902, *septendecim, cassini, septendecula*, 28-30 May 1936, *septendecim, cassini*, 27 May 1953, *cassini*, 9 June 1953, *septendecim*, (Franklin Park), 30 May 1936, *septendecula*. **HAMILTON Co.:** 26 May 1932 (Brood X-1936 stragglers?), *cassini*; 8 June 1953, *septendecim, cassini*; June 1987, *septendecim, cassini, septendecula*; Cincinnati (Spring Grove), 1936, *septendecim, cassini*; Cincinnati, June 1983, *cassini* (Brood X-1987 stragglers?) (K. Vulinec, pers. communication); at OH-4 and I-275, 8 June 1987, *cassini*; Cincinnati, Miami-Whitewater Park and Mt. Airy Forest, 9 June 1987, *septendecim, cassini, septendecula* and *Massospora cicadina*; Cincinnati, Mt. Airy Forest, 2 June 2004, all laying eggs, *septendecim, cassini, septendecula* (Lakes-Harlan); Sharonville, 2

June 2004, *cassini* (Lakes-Harlan). **MONTGOMERY Co.:** 6 June 1953, *cassini*; I-75 at exit 47, and in Moraine, 2 June 2004, *cassini* (Lakes-Harlan). **PAULDING Co.:** just over the line from Defiance Co., 23 June 1987, *septendecim, cassini*.. **PICKAWAY Co.:** "Caldwood" (3.5 miles south of 316 on east side of 104), 1953, *septendecim, cassini*, 1954, 1955, *septendecim* (Brood X-1953 stragglers?), 10 May 1970, *septendecim, cassini, septendecula*; Washington Township, 28 May 1936, *septendecim, cassini, septendecula*; OH-104, 3 mi. south of OH-316, 30 May 2004, *septendecim, cassini*, a few *cassini* laying eggs (Lakes-Harlan); OH-104, 4 mi. south of OH-22, 30 May 2004, *cassini* (Lakes-Harlan) **PUTNAM Co.:** OH-15, 2 mi. north of Rice, 2 June 2004, *cassini* (Lakes-Harlan). **TUSCARAWAS Co.:** Stillwater, 3 June 1953, *cassini*. **WARREN Co.:** along I-75, 2 June 2004, *cassini* (Lakes-Harlan). **WILLIAMS Co.:** along Co. Rd. H, slanting from northwest to southeast, about a mile east of the IN State line and less than a mile east of Co. Rd. 1, 23 June 1987, *septendecim*; along OH-49 and the first road going east-west south of the Michigan line, 15 June 2004, *septendecim*; near the Nettle Lake Mound Group (4 mounds of presumably Hopewell Indians), along Williams Co. Road S, near OH-49, 15 June 2004, *septendecim*.

**Pennsylvania--ADAMS Co.:** Cashtown, 19 June 1970, *septendecim, cassini*; Gettysburg, 11 June 1936, *septendecim, cassini*, 19 June 1970, *septendecim, cassini*, 14-15 June 1970, *cassini, septendecula*; 1 June 1970, *septendecim, cassini, septendecula*; 14 June 1970, *septendecula*; near South Mtn., May 1987, species unknown. **BEDFORD Co.:** Bedford, 20-27 June 1953, *septendecim, cassini, septendecula*. **BERKS Co.:** 15 June 1902, *septendecim*; Krumsville, 1936, *septendecim*; Long Swamp, 24 May 1936, *septendecim*; Albany Twp., 2 mi. S of Kempton on Rt. 143 at Pine Creek, 50° 20.815' N, 75° 52.455' W, 16 June 2004, *septendecim, cassini* (Lankalis); Hereford Twp., Seisholtzville, 40° 28.552' N, 75° 35.444' W,

16 June 2004, *septendecim*, *cassini* (Lankalis); Rockland Twp., between Pricetown & Jerusalem, Schweitzer Rd. & Five Points Rd., 40° 26.609' N, 75° 43.337' W, 24 June 2004, *septendecim*, *cassini* (Lankalis). **BUCKS Co.:** Quakertown (on Pa. Turnpike), 13 June 1970, *septendecim*, *cassini*; along Route 9 between second exit and County line, and just before Lehigh Co., 2-7 July 1987, species unknown; Bedminster Twp., Nockamixon State Park, along Rt. 563, 40° 27.878' N, 75° 14.100' W, 13 June 2004, *septendecim*, *cassini*, *septendecula* (Lankalis); nr. Quakertown along PA-313, 40°25.779'N, 75°17.576W, 13 June 2004, *septendecim*, *cassini*, *septendecula* (Lankalis).. **CARBON Co.:** Lehigh Gorge (top of west side, near Glen Onoko and James Run, hundreds singing), 27 June 2003, *septendecim* (Brood X-2004 stragglers?); Lehigh Gorge, 2,8 June 2004, smaller numbers singing, *septendecim* (Lankalis). **CHESTER Co.:** Cedarville, 17 May 1936, *septendecim*; near Chester Springs, 7 June 1936, *septendecim*; New Garden, 25 May 1902, *septendecim*; Valley Forge, 21 June 1936, *septendecim*; West Chester, 12 June 1919, *cassini*, *septendecula*. **COLUMBIA Co.:** along I-80, 2 mi. past junction with PA-339, 2-7 July 1987, species unknown; Mifflin Twp., along I-80, miles 247.3-255, loudest chorus about mile 248, [June] 2004, *septendecim* (Lankalis). **CUMBERLAND Co.:** New Cumberland, 12 June 1936, *septendecim*. **DAUPHIN Co.:** Hammelstown, 1919, *septendecim*, *septendecula*. **FRANKLIN Co.:** Scotland, 2 June 1932, *septendecim* (Brood X-1936 straggler?); near South Mtn., May 1987, species unknown. **FULTON Co.:** Sideling Hill, Summit, Blue Ridge Mountains, 2195 feet, 8 June 1936, *septendecim*. **HUNTINGDON Co.:** Ardin Leim, 5 June 1936, *septendecim*; Shade Valley north of Shade Gap, 1 June 1919, species unknown (nymphs of apparently more than one species). **LANCASTER Co.:** Lancaster, 1885, *septendecim*; Lititz, June 1902, *septendecim*. **LEBANON Co.:** 20 August 1919, *septendecim*; Drums, just west of I-80 & I-81, 9 June 2004, *septendecim* (Lankalis). **LEHIGH Co.:** 3 June 1970, *septendecim*;

Upper Milford Twp., Zionsville, Salem Evangelical Church, 40° 28.565' N, 75° 31.608' W, 9 June 2004, *septendecim*, *cassini* (Lankalis); Upper Saucon Twp., along Rt. 309, 1 mi. south of Coopersburg, 40° 29.446' N, 75° 22.771' W, 13 June 2004, *septendecim*, *cassini*, *septendecula* (Lankalis); south side of South Mtn., opposite Bethlehem & Fountain Hill, along Seidersville Rd., 40°35.515'N, 75°22.185'W, 13 June 2004, *septendecim*, *cassini*, *septendecula* (Lankalis).

**LUZERNE Co.:** along I-80 about Mile 250-252, 2-7 July 1987, species unknown; Hanover Twp., Askam Borough, 41° 11.6' N, 76° 17.5' W, 8 June 2004, *septendecim* & cast skeletons (Lankalis); Jenkins Twp., Yatesville, 41° 18.061' N, 75° 48.387' W, 23 June 2004, *septendecim* (Lankalis); Nescopeck Twp., along I-80, miles 244-247.3, loudest chorus about mile 247, [June] 2004, *septendecim* (Lankalis); Nanticoke area, 27 May, 8 June 2004, *septendecim* (Lankalis).

**LYCOMING Co.:** northeast of Williamsport, 31 May 2004, *septendecim* (Lankalis).

**MONTGOMERY Co.:** Edge Hill, 22 June 1902, *septendecim*; Sumneytown, 1 June 1935, *cassini* (Brood X-1936 straggler?). **NORTHAMPTON Co.:** Saucon Twp., along Seidersville Rd. and Saucon Creek, 40° 35.514' N, 75° 22.185' W, 13 June 2004, *septendecim*, *cassini*, *septendecula* (Lankalis).

**PHILADELPHIA Co.:** Philadelphia, 1919, *septendecim*. **Pike Co.:** 10 mi. north of Bushkill along Route 209, Delaware Water Gap National Recreation Area, 2-7 July 1987, species unknown. **YORK Co.:** 14 June 1970, *septendecim*; York Furnace, May 1987, species unknown.

**SCHUYLKILL Co.:** North Union Twp., 3 mi. west of Oneida at "The Cove," 40° 54.415' N, 76° 10.629' W, 14 June 2004, *septendecim* (Lankalis); Zion Grove, 40° 54.075' N, 76° 13.644' W, 12 June 2004, *septendecim* (Lankalis). **SUSQUEHANNA Co.:**

Laurel Lake, 20 June 1936, *septendecula*. **CO. UNKNOWN:** Micheaux [sic=Michaux] State Forest, Smith Mt., 8 June 1936, *septendecim* [Adams, Cumberland, and York counties?].

**Tennessee—BLOUNT Co.:** in bluffs along US-129 toward Knoxville airport, 28 May 1987, *septendecim*, *cassini*, *septendecula*. **KNOX Co.:** Knoxville, 25 May 1919, *septendecim*, 17-19 May 1936, *cassini*, *septendecula*, along US-129, 28 May 1987, *septendecim*, *cassini*, *septendecula*, June 1987, *septendecim*, *cassini*, *septendecula*. **LOUDON Co.:** along I-75 & I-40, about 20 mi. south of Knoxville, 28 May 1987, *septendecim*.; just over the line from Knox Co. along US-129, 28 May 1987, *septendecim*, *cassini*, *septendecula*. **MONROE Co.:** along TN-68, both sides of rd. near Coker Creek, Tellico Mtn. area, 27 May 1987, *septendecim*. **POLK Co.:** along TN-68 just over the line south from Monroe Co, between Farner and Turtletown, 27 May 1987, *septendecim*; from Ducktown, along TN-68 to Georgia border, 27 May 1987, *septendecim*.

**Virginia--ARLINGTON Co.:** Arlington, 15 June 1902, 24 May 1936, 6-11 May 1953, *septendecim*, 11 June 1987, *septendecim* (Zyla), (N. Quebec St.), May 2000, 12, 20 May 2000, (St. Agnes Church) 17 May 2000, *septendecim* (Brood X-2004 stragglers?) (Zyla); Maywood, 9 May 1918 (Brood X-1919 straggler?), *septendecim*. **AUGUSTA Co.:** Staunton, 25 October 1950, *septendecim* (Brood X-1953 straggler?). **FAIRFAX Co.:** Alexandria (Bloomfield Drive), 18 May 2000, *septendecim* (Brood X-2004 straggler?) (Zyla); Annadale [sic=Annandale], 25. 26 May 1987, *septendecim*, (NVCC Campus), 9 June 1987, *septendecim* (Zyla); Centreville (Cedar Break Rd.), 18 May 2000 *septendecim* (Brood X-2004 straggler?) (Zyla); Falls Church, May 1919, 4 June 1936, *septendecim*, 3 June 1987 *septendecim* (Zyla); Great Falls, 23 May 1918 (Brood X-1919 stragglers?), *septendecim*, *septendecula*; Vienna, 9 June 1970, *septendecim* (Zyla). **FREDERICK Co.:** Winchester [& Wincester (sic)], June 1936, 19, 21, 23 May 1953, 9 June 1970, *cassini*, 9 June 1970 *septendecim* (Zyla). **LOUDON Co.:** Limestone branch, north

of Leesburg, 17 May 1953, *cassini*; Round Hill (Orchard Site), 24 May 1953, *cassini* (Zyla).  
**SHENANDOAH Co.:** Strasburg, 3 June 1953, *cassini*, (along Tumbling Run), 31 May 1970, *septendecim*, *cassini*, *septendecula*. **WARREN Co.:** Shenandoah National Park, 8 May 1987 *septendecim* (Zyla). **WESTMORELAND Co.:** Potomac River, 8 June 1902, *septendecula*.  
**CO. UNKNOWN:** Hitaffer, 1919 *septendecim*.

**West Virginia--BERKELEY Co.:** Martinsburg, Hedgeville, May 1970, species unknown (large emergence, John Hoagland, pers. communication); **GRANT Co.:** near Scherr, along WV-93, 3.1 mi. NW of the intersection with WV-42, above a cemetery and about 100 ft. from a transmission line, collected dead, 24 June 2004, *septendecim*, *cassini*, *septendecula* (McGinnis/Lankalis).

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\* Based on museum specimens, tape-recordings, mostly by T.E. Moore and UMMZ, on peer-reviewed publications, and on available field notes of competent observers.

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