

# POSTILLA

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**Yale** PEABODY MUSEUM OF NATURAL HISTORY

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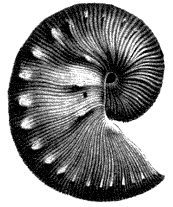
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**A Catalog of  
Larval Amphibia  
in the Yale Peabody Museum**

Gregory J. Watkins-Colwell

Twan A. A. M. Leenders

# Postilla

Number 232

*A Catalog of Larval Amphibia in the Yale Peabody Museum*

Gregory J. Watkins-Colwell and Twan A. A. M. Leenders

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# A Catalog of Larval Amphibia in the Yale Peabody Museum

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## Abstract

The herpetological collection of Yale University's Peabody Museum of Natural History contains over 1,460 lots of larval amphibians, representing more than 9,000 individuals. Although the majority of the larvae originate from North American localities, especially Connecticut, the collection includes representative holdings from several countries. A catalog of the entire Yale Peabody Museum larval collection is provided here.

## Keywords

Amphibia, Anura, Caudata, larva, catalog.

## Introduction

The amphibian larval collection at the Yale Peabody Museum of Natural History (YPM) includes over 1,460 specimen lots of more than 9,000 individual larvae or early metamorphs, and spans 125 years of collecting. At least 46 species from 12 families are represented. The largest series is for

*Scaphiopus holbrookii* (Harlan) collected in Connecticut during the 1930s, with 657 specimen lots (more than 5,000 individuals). North American localities are the best represented in the collection, with most specimens from Connecticut. Significant holdings from localities outside the United States include Cameroon, Canada, China, Egypt, El Salvador, Equatorial Guinea, Greece, Hong Kong, Mexico, New Caledonia, Panama, Surinam, The Philippines and Uruguay.

Specimens in the collection are catalogued as stage-specific lots. Staging for larval Anura is based on Gosner (1960). Staging for larval Caudata is based on Harrison (1969) and Gallien and Durocher (1957) for Ambystomatidae and Salamandridae. Staging for larvae from other salamander families is notoriously difficult. Staging for Plethodontidae and Proteidae does not follow either Harrison (1969) or Gallien and Durocher (1957) because of differences in early stages of metamorphosis (Duellman and Trueb 1994). For these two families young larvae are described in morphological terms (for example, larva with front

limbs), and older larvae are assigned a stage concurrent with a comparable developmental stage for the Ambystomatidae and Salamandridae. Differences between stages can be subtle and subject to specimen condition, shrinkage in preservative, or both; thus some stages are combined in the collection. Stages such as Gosner 25 to 27 are combined, as are many of the stages that occur within the egg. Appendices 1 and 2 give descriptions for the staging codes used in the species accounts below.

Historically, larvae in the collection were housed in various preservatives, including ether and ethanol. In 2003, during a project sponsored by the Connecticut Department of Environmental Protection, all amphibian eggs and larvae were transferred to 10% buffered formalin for long-term storage according to the procedures outlined in Simmons (2002).

Initial identifications of the specimens in the collection usually were made by collectors in the field or by investigators rearing captives in the laboratory. During 2003, all identifications were reexamined using available literature sources, such as: Altig and Ireland (1984), Altig (1970) and Conant and Collins (1998) for North American species; Duellman (2001), Lips and Savage (1996), and Savage (2002) for Central American species, and McDiarmid and Altig (1997) for African and Asian species.

We follow Frost (2002) for taxonomic classification. The species accounts include information on geographic locality, YPM catalog number, collector, collecting date (mm/dd/yyyy), and the sample size of the lot. For eggs and early embryos, sample sizes of lots are sometimes not given. Generally, in such cases the sample is a mass of

eggs, often containing more than 100 embryos.

## Catalog of Larval Amphibia

### ANURA

#### ASTYLOSTERNIDAE

*Trichobatrachus robustus* Boulenger 1900

Gosner 25–27: Cameroon: Mbu Village, Rumpi Hills: YPM 07838, Charles D. Miller III, 11/25/1970, n=1

#### BUFONIDAE

*Bufo* sp. Laurenti 1768

Gosner 41: Uruguay: Departamento Rocha: Cerro Buena Vista: Barra de Valizas: YPM 09587, Jorge de Leon, 12/09/2003, n=1

*Bufo americanus* Holbrook 1836

Gosner 1–18: Locality unknown: YPM 07600, Stanley C. Ball, 5/2/1935; YPM 07601, Stanley C. Ball, 5/3/1935, n=48; YPM 07602, Stanley C. Ball, 5/2/1935, n=16;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 00593, Stanley C. Ball, 4/26/1936; YPM 07604, Stanley C. Ball, 5/2/1932, n=7; YPM 07727, Stanley C. Ball and Marshall B. Bishop, 4/23/1934; YPM 07728, Stanley C. Ball and Marshall B. Bishop, 4/24/1934, n=1; YPM 07730, Stanley C. Ball, 4/24/1934, n=1; YPM 07731, Stanley C. Ball, 4/24/1934, n=1; YPM 00588, Stanley C. Ball, 4/30/1935; YPM 07739, Stanley C. Ball, 4/25/1934, n=13; YPM 07740, Stanley C. Ball, 4/25/1934,

n=62; YPM 07742, Stanley C. Ball, 4/25/1934, n=56;

Gosner 19–22: USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07611, Stanley C. Ball, 5/5/1932, n=2; YPM 07737, Stanley C. Ball, 4/25/1934, n=6; YPM 07738, Stanley C. Ball, 4/26/1934, n=8; YPM 07741, Stanley C. Ball, 4/27/1934, n=11

Gosner 23–24: USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07610, Stanley C. Ball, 5/5/1932, n=42; YPM 07612, Stanley C. Ball, 5/5/1932, n=4

Gosner 25–27: Canada: Quebec: Gaspé: Grande Grève: Robert's Swamp: YPM 08247, Stanley C. Ball, 6/30/1936, n=6;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07605, Stanley C. Ball, 5/25/1932, n=50; YPM 07606, Stanley C. Ball, 5/8/1932, n=24; YPM 07607, Stanley C. Ball, 5/7/1932, n=43; YPM 07608, Stanley C. Ball, 5/6/1932, n=57; YPM 07609, Stanley C. Ball, 5/10/1932, n=38; YPM 07733, Stanley C. Ball, 5/1/1934, n=2; YPM 07734, Stanley C. Ball, 5/1/1934, n=2; YPM 07735, Stanley C. Ball, 4/30/1934, n=5; YPM 07736, Stanley C. Ball, 5/4/1934, n=5;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 08262, Stanley C. Ball, 5/16/1934, n=2

Gosner 28–30: Canada: Quebec: Gaspé: Grande Grève: YPM 07655, Stanley C.

Ball, 6/30/1936, n=38;

Canada: Quebec: Gaspé: Peninsula Cap aux Os: YPM 07652, Stanley C. Ball and Donat Fertin 6/22/1936; n=1; YPM 07654, Stanley C. Ball, 6/27/1936; n=14;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07732, Stanley C. Ball, 5/7/1934, n=3;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 08263, Stanley C. Ball, 5/16/1934, n=4;

USA: Connecticut: Windham County: Killingly: YPM 06702, Richard Haley, 5/19/2002, n=10

Gosner 31–33: Canada: Quebec: Gaspé: Grande Grève Robert's Swamp: YPM 08248, Stanley C. Ball, 6/30/1936, n=7;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 07702, Stanley C. Ball, 3/16/1934, n=20;

USA: Connecticut: New London County: Colchester: YPM 07196, Hank Gruner 5/11/2002, n=11

Gosner 34–36: Canada: Quebec: Gaspé: Grande Grève Robert's Swamp: YPM 07653, Stanley C. Ball, 7/20/1936, n=10;

USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 08898, Anton A. Leenders, 5/27/2003, n=1;

USA: Connecticut: New Haven County:  
Ansonia (lat 41.2046°N, long 73.0446°W):  
YPM 08264, Stanley C. Ball, 5/16/1934,  
n=6;

USA: Connecticut: New Haven County:  
Hamden (lat 41.2345°N, long 72.5350°W):  
YPM 07620, Stanley C. Ball, 6/24/1934,  
n=3

Gosner 37–38: Canada: Quebec: Gaspé:  
Grande Grève Robert's Swamp: YPM  
08244, Stanley C. Ball, 7/20/1936, n=2;

USA: Connecticut: New Haven County:  
Ansonia (lat 41.2046°N, long 73.0446°W):  
YPM 07701, Stanley C. Ball, 3/16/1934,  
n=8;

USA: Connecticut: New Haven County:  
Hamden (lat 41.2345°N, long 72.5350°W):  
YPM 07621, Stanley C. Ball, 6/24/1934, n=10

Gosner 39: Canada: Quebec: Gaspé:  
Grande Grève Robert's Swamp: YPM  
08245, Stanley C. Ball, 7/20/1936, n=1;

USA: Connecticut: New Haven County:  
Hamden (lat 41.2345°N, long 72.5350°W):  
YPM 08241, Stanley C. Ball, 6/24/1934, n=4

Gosner 40: Canada: Quebec: Gaspé:  
Grande Grève: Robert's Swamp: YPM  
08246, Stanley C. Ball, 7/20/1936, n=5;

USA: Connecticut: Litchfield County:  
Canaan (lat 41.5921°N, long 73.2116°W):  
YPM 08943, Anton A. Leenders, 7/13/2003,  
n=1;

USA: Connecticut: New Haven County:

Ansonia (lat 41.2046°N, long 73.0446°W):  
YPM 08260, Stanley C. Ball, 5/16/1934, n=2

Gosner 41: USA: Connecticut: New Haven  
County: Ansonia (lat 41.2046°N, long  
73.0446°W): YPM 08261, Stanley C. Ball,  
5/16/1934, n=1;

USA: Connecticut: New London County:  
Norwich: YPM 06715, Gregory J. Watkins-  
Colwell and Daniel Jonathon Drew  
6/1/2002, n=59

Gosner 42: USA: Connecticut: New Haven  
County: Ansonia (lat 41.2046°N, long  
73.0446°W): YPM 07700, Stanley C. Ball,  
3/16/1934, n=2;

USA: Connecticut: New Haven County:  
Hamden (lat 41.2345°N, long 72.5350°W):  
YPM 07619, Stanley C. Ball, 6/24/1934, n=3

Gosner 43: USA: Connecticut: YPM 07565,  
Marshall B. Bishop, n=3;

USA: Connecticut: New Haven County:  
Hamden: YPM 07729, Stanley C. Ball,  
5/29/1934, n=1;

USA: Connecticut: New Haven County:  
Woodbridge (lat 41.2105°N, long  
72.5850°W): YPM 07743, Stanley C. Ball  
and Marshall B. Bishop, 6/7/1934, n=6

Gosner 44: USA: Connecticut: Middlesex  
County: North Plain (lat 41.2500°N, long  
72.2000°W): YPM 07566, Stanley C. Ball,  
7/16/1933, n=1; YPM 07567, Stanley C.  
Ball, 7/21/1933, n=1;

USA: Connecticut: New Haven County:

Ansonia (lat 41.2046°N, long 73.0446°W):  
YPM 08259, Stanley C. Ball, 5/16/1934,  
n=1;

USA: Connecticut: New Haven County:  
Woodbridge (lat 41.2105°N, long  
72.5850°W): YPM 08266, Stanley C. Ball  
and Marshall B. Bishop, 6/7/1934, n=1

Gosner 45: USA: Connecticut: Middlesex  
County: North Plain (lat 41.2500°N, long  
72.2000°W): YPM 07794, Stanley C. Ball,  
May 1933, n=2;

USA: Connecticut: New Haven County:  
Seymour (lat 41.2348°N, long 73.0435°W):  
YPM 07563, Marshall B. Bishop, 6/20/1933,  
n=8; YPM 07574, Marshall B. Bishop,  
6/23/1933, n=7;

USA: Connecticut: New Haven County:  
Woodbridge (lat 41.2105°N, long  
72.5850°W): YPM 08267, Stanley C. Ball  
and Marshall B. Bishop, 6/7/1934, n=1

Gosner 46: USA: Connecticut: Fairfield  
County: near Seymour: YPM 07569, Mar-  
shall B. Bishop, 6/26/1933, n=2;

USA: Connecticut: Fairfield County:  
Trumbull: YPM 09150, Daniel Jonathon  
Drew, 8/7/2003, n=1; YPM 09109, Gregory  
J. Watkins-Colwell and Anton A. Leenders,  
7/30/2003, n=1;

USA: Connecticut: Litchfield County:  
Canaan (lat 41.5921°N, long 73.2116°W):  
YPM 08938–08942, Anton A. Leenders,  
7/13/2003, n=1 each; YPM 09133, Gregory  
J. Watkins-Colwell and Anton A. Leenders,  
7/31/2003, n=1;

USA: Connecticut: New Haven County:  
Hamden (lat 41.2345°N, long 72.5350°W):  
YPM 07618, Stanley C. Ball, 6/24/1934,  
n=7;

USA: Connecticut: New Haven County:  
Seymour (lat 41.2348°N, long 73.0435°W):  
YPM 07572, Marshall B. Bishop, 7/18/1933,  
n=2; YPM 07573, Marshall B. Bishop,  
7/18/1933, n=4; YPM 07687, Stanley C.  
Ball, 8/17/1934, n=3;

USA: Connecticut: New Haven County:  
Woodbridge: (lat 41.2109°N, long  
73.0032°W): YPM 07561, Marshall B.  
Bishop, 7/19/1933, n=1; YPM 07564, Mar-  
shall B. Bishop, 7/18/1933, n=1; YPM 07568,  
Marshall B. Bishop, 6/27/1933, n=4; YPM  
07570, Marshall B. Bishop, 7/18/1933, n=9;

USA: Connecticut: New Haven County:  
Woodbridge (lat 41.2109°N, long  
73.0032°W): YPM 07571, Marshall B.  
Bishop, 7/18/1933, n=5

*Bufo fowleri* Hinckley 1882

Gosner 25–27: USA: Connecticut: New  
Haven County: Hamden: YPM 07592, Stan-  
ley C. Ball, 6/21/1935, n=3; YPM 07593,  
Stanley C. Ball, 6/21/1935, n=5; YPM  
07785, Stanley C. Ball, 6/26/1935, n=25

Gosner 40: USA: Connecticut: New Haven  
County: Hamden: YPM 08724, Stanley C.  
Ball, 7/31/1935, n=1; YPM 08725, Stanley  
C. Ball, 7/31/1935, n=6

Gosner 41: USA: Connecticut: New Haven  
County: Hamden: YPM 08728, Stanley C.  
Ball, 7/31/1935, n=2



Gosner 42: USA: Connecticut: New Haven County: Hamden: YPM 08729, Stanley C. Ball, 7/31/1935, n=1

Gosner 43: USA: Connecticut: New Haven County: Hamden: YPM 08727, Stanley C. Ball, 7/31/1935, n=1

*Bufo "lentiginosus"* Gunther 1859

Gosner 1–18: Locality unknown: YPM 09336, Paul G. Howes

Gosner 25–27: Locality unknown: YPM 09333, Paul G. Howes, n=3; YPM 09334, Paul G. Howes, n=3

Gosner 28–30: Locality unknown: YPM 09339, Paul G. Howes, n=3

Gosner 31–33: Locality unknown: YPM 09335, Paul G. Howes, n=3

Gosner 34–36: Locality unknown: YPM 09338, Paul G. Howes, n=3

Gosner 41: Locality unknown: YPM 09337, Paul G. Howes, n=2

Gosner 43: Locality unknown: YPM 09340, Paul G. Howes, n=1

Gosner 46: Locality unknown: YPM 09341, Paul G. Howes, n=2

*Bufo marinus* (Linnaeus 1758)

Gosner 46: Panama: YPM 06489–06498, J. M. Valentine, 1924, n=1 each;

Surinam: Nickerie District: Kayser Airstrip:

YPM 07346, 11/24/1961, n=1; YPM 07347, 11/24/1961, n=1; YPM 07348–7357, 11/24/1961, n=1 each

*Bufo regularis* Reuss 1833

Gosner 28–30: Egypt: Matruh Governorate: Bahig (lat 30.5600°N, long 29.3500°E): YPM 09582, Thomas E. Lovejoy, 10/9/1962, n=1

Gosner 34–36: Egypt: Matruh Governorate: Bahig (lat 30.5600°N, long 29.3500°E): YPM 09581, Thomas E. Lovejoy, 10/9/1962, n=4

Gosner 39: Egypt: Matruh Governorate: Bahig (lat 30.5600°N, long 29.3500°E): YPM 09580, Thomas E. Lovejoy, 10/9/1962, n=7

Gosner 41: Egypt: Matruh Governorate: Bahig (lat 30.5600°N, long 29.3500°E): YPM 09579, Thomas E. Lovejoy, 10/9/1962, n=3

Gosner 42: Egypt: Matruh Governorate: Bahig (lat 30.5600°N, long 29.3500°E): YPM 00886, Thomas E. Lovejoy, 10/9/1962, n=2

Gosner 43: Egypt: Matruh Governorate: Bahig (lat 30.5600°N, long 29.3500°E): YPM 00885, Thomas E. Lovejoy, 10/8/1962, n=3

Gosner 46: Egypt: Matruh Governorate: Bahig (lat 30.5600°N, long 29.3500°E): YPM 00885, Thomas E. Lovejoy, 10/8/1962, n=2

*Bufo schneider* Werner 1894

Gosner 46: Uruguay: Departamento Arti-

jas: Arroyo Mandiyu: YPM 09600–09606,  
Jorge de Leon, 11/19/2003, n=1 each

#### HYLIDAE

*Agalychnis callidryas* (Cope 1862)

Gosner 43: Locality unknown: YPM 05921,  
n=1

*Agalychnis moreletii* (Duméril 1853)

Gosner 23–24: El Salvador: Departamento  
Ahuachapán: Municipio San Francisco  
Menendez: Cantón Escoroso: Parque Na-  
cional el Imposible, Sector San Benito (lat  
18.82309°N, long 89.94272°W): YPM  
07287, Anton Leenders, 10/25/2002, n=19

Gosner 25–27: El Salvador: Departamento  
Ahuachapán: Municipio San Francisco  
Menendez: Cantón Escoroso: Parque Na-  
cional el Imposible, Sector San Benito (lat  
18.82309°N, long 89.94272°W): YPM  
06457, Anton Leenders, 1/8/2002, n=3;  
YPM 06458, Anton Leenders and Kattia  
Gomez, 2/4/2002, n=3; YPM 07288, Anton  
Leenders, 10/25/2002, n=5; YPM 07289,  
Anton Leenders, 10/25/2002, n=5;

El Salvador: Departamento Santa Ana: Mu-  
nicipio Santa Ana: Cantón Los Flores: Par-  
que Nacional Los Andes: Volcán Santa Ana  
(lat 13.5209°N, long 89.3714°W): YPM  
07290, Anton Leenders, 10/31/2002, n=7;  
YPM 07292, Anton Leenders, 11/3/2002,  
n=3

Gosner 39: El Salvador: Departamento  
Santa Ana: Municipio Santa Ana: Cantón  
Los Flores: Parque Nacional Los Andes:  
Volcán Santa Ana (lat 13.5209°N, long

89.3714°W): YPM 07291, Anton Leenders,  
11/3/2002, n=1

Gosner 41: El Salvador: Departamento  
Santa Ana: Municipio Santa Ana: Cantón  
los Flores: Parque Nacional Los Andes: Vol-  
cán Santa Ana (lat 13.5209°N, long  
89.3714°W): YPM 07260, Anton Leenders,  
10/31/2002, n=1; YPM 07262, Anton Leen-  
ders, 10/31/2002, n=1

Gosner 42: El Salvador: Departamento  
Santa Ana: Municipio Santa Ana: Cantón  
Los Flores: Parque Nacional Los Andes:  
Volcán Santa Ana (lat 13.5209°N, long  
89.3714°W): YPM 07251, Anton Leenders,  
11/3/2002, n=1; YPM 07258, Anton Leen-  
ders, 11/3/2002, n=1; YPM 07261, Vladlein  
Henriquez, 10/31/2002, n=1; YPM 07263,  
Vladlein Henriquez, 10/31/2002, n=1

Gosner 43: El Salvador: Departamento  
Santa Ana: Municipio Santa Ana: Cantón  
Los Flores: Parque Nacional Los Andes:  
Volcán Santa Ana (lat 13.5209°N, long  
89.3714°W): YPM 07249, Anton Leenders,  
11/3/2002, n=1; YPM 07252, Anton Leen-  
ders, 11/3/2002, n=1; YPM 07253, Anton  
Leenders, 11/3/2002, n=1; YPM 07257,  
Anton Leenders, 11/3/2002, n=1

Gosner 44: El Salvador: Departamento  
Santa Ana: Municipio Santa Ana: Cantón  
Los Flores: Parque Nacional Los Andes:  
Volcán Santa Ana (lat 13.5209°N, long  
89.3714°W): YPM 07250, Anton A. Leen-  
ders, 11/3/2002, n=1; YPM 07254–07256,  
Anton A. Leenders, 11/3/2002, n=1 each;  
YPM 07259, Anton A. Leenders, 11/3/2002,  
n=1; YPM 07264, Vladlein Henriquez,  
10/31/2002, n=1

*Hyla versicolor* LeConte 1825

Unstaged larvae (prepared as tissue samples and frozen): USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 09123–09131, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=1 each;

Gosner 25–27: USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 08949, Anton A. Leenders, 7/13/2003, n=1; YPM 08953–08954, Anton A. Leenders, 7/13/2003, n=1 each; YPM 09141, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=1

Gosner 28–30: USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 09143, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=14

Gosner 31–33: USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): (G31) YPM 08952, Anton A. Leenders, 7/13/2003, n=4

Gosner 34–36: Locality unknown: YPM 07614, Stanley C. Ball, 7/5/1934, n=2;

USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 08948, Anton A. Leenders, 7/13/2003, n=3; YPM 08951, Anton A. Leenders, 7/13/2003, n=2; YPM 09142, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=2

Gosner 37–38: USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long

73.2116°W): YPM 09145, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=7; YPM 08950, Anton A. Leenders, 7/13/2003, n=1

Gosner 39: USA: Connecticut: YPM 07616, Stanley C. Ball, 7/25/1934, n=2;

USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 09139, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=1

Gosner 40: USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 08947, Anton A. Leenders, 7/13/2003, n=2; YPM 09140, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=1;

USA: Connecticut: New Haven County: Woodbridge: (lat 41.2109, 73.0032): YPM 07816, Stanley C. Ball, 7/12/1934, n=1

Gosner 41: USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 08945–08946, Anton A. Leenders, 7/13/2003, n=1 each; YPM 09137, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=1; YPM 09144, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=7; YPM 09138, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=1

Gosner 42: USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 09135, Gregory J. Watkins-Colwell and Anton A. Leenders, 7/31/2003, n=1;

USA: Connecticut: New Haven County:  
New Haven (lat 41.1829°N, long  
72.5543°W): YPM 07853, Addison E. Verrill,  
n=1; YPM 07855, Addison E. Verrill, n=1

Gosner 43: USA: Connecticut: Litchfield  
County: Canaan (lat 41.5921°N, long  
73.2116°W): YPM 09136, Gregory J.  
Watkins-Colwell and Anton A. Leenders,  
7/31/2003, n=1

Gosner 44: USA: Connecticut: New Haven  
County: Woodbridge (lat 41.2109°N, long  
73.0032°W): YPM 07726, Stanley C. Ball  
and Marshall B. Bishop, 7/6/1934, n=2

Gosner 45: USA: Connecticut: Litchfield  
County: Canaan (lat 41.5921°N, long  
73.2116°W): YPM 08936, Anton A. Leen-  
ders, 7/13/2003, n=1; YPM 09030, Anton A.  
Leenders, 7/11/2003, n=1

Gosner 46: USA: Connecticut: YPM 07615,  
Stanley C. Ball, 7/25/1934, n=2;

USA: Connecticut: New Haven County:  
New Haven (lat 41.1829°N, long  
72.5543°W): YPM 07854, Addison E. Ver-  
rill, n=1

*Litoria aurea* (Lesson 1830)

Gosner 25–27: New Caledonia: Provence  
Sud: YPM 07668, Jon Kolby 2/3/2003, n=25

*Pseudacris crucifer* (Wied-Neuwied 1838)

Gosner 1–18: USA: Connecticut: New  
Haven County: Ansonia (lat 41.3521°N,  
long 73.0735°W): YPM 07613, Stanley C.  
Ball, 4/18/1934;

USA: Connecticut: New Haven County:  
Woodbridge (lat 41.2109°N, long  
73.0032°W): YPM 01592, Marshall B.  
Bishop, 5/1/1936

Gosner 19–22: Locality unknown: YPM  
08720, Stanley C. Ball, n=61;

USA: Connecticut: Litchfield County:  
Canaan (lat 15.921°N, long 73.2116°W):  
YPM 08638, Anton A. Leenders, 5/27/2003,  
n=10

Gosner 23–24: USA: Connecticut: Litch-  
field County: Canaan (lat 15.921°N, long  
73.2116°W): YPM 08227, Anton A. Leen-  
ders, 5/23/2003, n=2; YPM 08680, Anton A.  
Leenders, 5/29/2003, n=10; YPM 08944,  
Anton A. Leenders, 7/13/2003, n=1

Gosner 25–27: USA: Connecticut: Litch-  
field County: Canaan (lat 41.5921°N, long  
73.2116°W): YPM 08032, Anton A. Leen-  
ders, 5/7/2003, n=6; YPM 08226, Anton A.  
Leenders, 5/23/2003, n=2; YPM 08637,  
Anton A. Leenders, 5/27/2003, n=1; YPM  
08678, Anton A. Leenders, 6/3/2003, n=3;  
YPM 08893, Anton A. Leenders, 6/9/2003,  
n=6; YPM 08955, Anton A. Leenders,  
7/13/2003, n=8;

USA: Connecticut: Middlesex County:  
Haddam: YPM 06639, Hank Gruner and  
W. Wilcox, 5/11/2002, n=9;

USA: Connecticut: New Haven County:  
Woodbridge (lat 41.2109°N, long  
73.0032°W): YPM 08255, Stanley C. Ball  
and Marshall B. Bishop, 3/7/1934, n=4;

USA: Connecticut: New London County:

Colchester: YPM 07197, Hank Gruner,  
5/11/2002, n=3;

USA: Connecticut: New London County:  
New London: YPM 08857, Anton A.  
Leenders and Casey Redington, 6/7/2003,  
n=1;

USA: Connecticut: New London County:  
Lyme: YPM 07180, Hank Gruner and Ed-  
ward Natoli, 5/11/2002, n=9; YPM 07194,  
Hank Gruner and Edward Natoli,  
5/11/2002, n=5;

USA: Connecticut: Windham County:  
Killingly: YPM 06704, Richard Haley,  
5/19/2002, n=3

Gosner 28–30: USA: Connecticut: Litch-  
field County: Canaan (lat 41.5921°N, long  
73.2116°W): YPM 08958, Anton A. Leen-  
ders, 7/11/2003, n=18;

USA: Connecticut: New Haven County:  
Seymour: YPM 08240, 5/11/2002, n=5;

USA: Connecticut: New Haven County:  
Woodbridge (lat 41.2105°N, long  
72.5850°W): YPM 07697, Stanley C. Ball  
and Marshall B. Bishop, 3/7/1934, n=11;  
YPM 07698, Stanley C. Ball and Marshall  
B. Bishop, 3/7/1934, n=13;

USA: Connecticut: New London County:  
Norwich (lat 41.54892°N, long  
72.07358°W): YPM 06717, 6/1/2002, n=10

Gosner 31–33: USA: Connecticut: Litch-  
field County: Canaan (lat 41.5921°N, long  
73.2116°W): YPM 08957, Anton A. Leen-  
ders, 7/11/2003, n=2;

USA: Connecticut: New Haven County:  
Woodbridge: Konold's Pond (lat 41.2105°N,  
long 72.5850°W): YPM 08256, Stanley C.  
Ball and Marshall B. Bishop, 3/7/1934, n=2

Gosner 37–38: USA: Connecticut: Litch-  
field County: Canaan (lat 41.5921°N, long  
73.2116°W): YPM 08956, Anton A. Leen-  
ders, 7/11/2003, n=1

Gosner 41: USA: Connecticut: Fairfield  
County: Fairfield: Connecticut Audubon  
Center: YPM 09021, Daniel Jonathon Drew  
and Sarah McGann, 7/18/2003, n=1;

USA: Connecticut: New London County:  
New London: YPM 08897, Gregory J.  
Watkins-Colwell and Anton A. Leenders  
and Hank Gruner and Richard Haley and  
Daniel Jonathon Drew and Brian Roach  
and Bryan Goff and Casey Redington,  
6/7/2003, n=2

Gosner 42: USA: Connecticut: Litchfield  
County: Canaan (lat 15.921°N, long  
73.2116°W): YPM 08937, Anton A. Leen-  
ders, 7/13/2003, n=1; YPM 09134, Gregory  
J. Watkins-Colwell and Anton A. Leenders,  
7/31/2003, n=1

Gosner 43: USA: Connecticut: New Haven  
County: Woodbridge (lat 41.2109°N, long  
73.0032°W): YPM 07688, Stanley C. Ball  
and Marshall B. Bishop, 6/7/1934, n=1

Gosner 44: USA: Connecticut: New Haven  
County: Seymour (lat 41.2348°N, long  
73.0435°W): YPM 07562, Marshall B.  
Bishop, 6/20/1933, n=1

Gosner 45: USA: Connecticut: Fairfield

County: Stratford (lat 41.1536°N, long 73.0714°W): YPM 08933, Gregory J. Watkins-Colwell, 7/10/2003, n=1; YPM 08963, Gregory J. Watkins-Colwell, 7/15/2003, n=1; YPM 09037, Gregory J. Watkins-Colwell, 7/18/2003, n=1;

USA: Connecticut: New London County: New London: YPM 08914, Hank Gruner, 6/8/2003, n=1

Gosner 46: USA: Connecticut: Fairfield County: Stratford (lat 41.1536°N, long 73.0714°W): YPM 08929, Gregory J. Watkins-Colwell, 7/7/2003, n=1; YPM 08930, Gregory J. Watkins-Colwell, 7/4/2003, n=1; YPM 08959–08962, Gregory J. Watkins-Colwell, 7/15/2003, n=1 each; YPM 09038, Gregory J. Watkins-Colwell, 7/18/2003, n=1; YPM 09035, Gregory J. Watkins-Colwell, 7/24/2003, n=1; YPM 09036, Gregory J. Watkins-Colwell, 7/18/2003, n=1;

USA: Connecticut: New London County: New London: YPM 08919, Hank Gruner, 6/27/2003, n=1

*Pseudacris triseriata* (Wied-Neuwied 1838)

Gosner 1–18: USA: Tennessee: Wilson County: YPM 07629, Charles D. Sullivan Company, Inc., 4/2003, n=2; YPM 07650, Charles D. Sullivan Company, Inc., 3/17/2003, n=2;

USA: Texas: Brazoria County: East Columbia (lat 29.0828°N, long 95.3656°W): YPM 01522, Marshall B. Bishop 3/22/1937

Gosner 23–24: USA: Tennessee: Wilson

County: YPM 07623, Charles D. Sullivan Company, Inc., 3/9/2003, n=3

Gosner 25–27: USA: Tennessee: Wilson County: YPM 07626, Charles D. Sullivan Company, Inc., 4/2003, n=2; YPM 07628, Charles D. Sullivan Company, Inc., 4/2003, n=1; YPM 07645, Charles D. Sullivan Company, Inc., 4/2003, n=1; YPM 07658, Charles D. Sullivan Company, Inc., 4/2003, n=2; YPM 07662, Charles D. Sullivan Company, Inc., 4/2003, n=1; YPM 07663, Charles D. Sullivan Company, Inc., 4/2003, n=1

Gosner 28–30: USA: Tennessee: Wilson County: YPM 08908, Charles D. Sullivan Company, Inc., 4/11/2003, n=2

Gosner 31–33: USA: Tennessee: Wilson County: YPM 07673, Charles D. Sullivan Company, Inc., 4/2003, n=3; YPM 08907, Charles D. Sullivan Company, Inc., 4/11/2003, n=4

Gosner 34–36: USA: Tennessee: Wilson County: YPM 07665, Charles D. Sullivan Company, Inc., 4/2003, n=3; YPM 08892, Charles D. Sullivan Company, Inc., 6/9/2003, n=5; YPM 08909, Charles D. Sullivan Company, Inc., 4/11/2003, n=2

Gosner 41: USA: Tennessee: Wilson County: YPM 07669, Charles D. Sullivan Company, Inc., 4/2003, n=1; YPM 07744, Charles D. Sullivan Company, Inc., 4/2003, n=1; YPM 08643, 5/29/2003, n=2; YPM 08891, 6/9/2003, n=1

Gosner 42: USA: Tennessee: Wilson County: YPM 07831, Charles D. Sullivan Company, Inc., 4/28/2003, n=1

Gosner 45: USA: Tennessee: Wilson County: YPM 08639, Charles D. Sullivan Company, Inc., 5/27/2003, n=1; YPM 08640, Charles D. Sullivan Company, Inc., 5/27/2003, n=1; YPM 08644, Charles D. Sullivan Company, Inc., 5/29/2003, n=1; YPM 08890, Charles D. Sullivan Company, Inc., 6/9/2003, n=1

*Scinax staufferi* (Cope 1865)

Gosner 25–27: El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Río Sapó (lat 13.5551°N, long 88.0607°W): YPM 07294, Anton A. Leenders, 11/3/2002, n=7; YPM 07297, Anton A. Leenders, 11/3/2002, n=8; YPM 07298, Anton A. Leenders, 11/3/2002, n=10

Gosner 31–33: El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Río Sapó (lat 13.5551°N, long 88.0607°W): YPM 07293, Vladlein Henriquez, 11/7/2002, n=3; YPM 07296, Anton A. Leenders, 11/3/2002, n=9

Gosner 34–36: El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Río Sapó (lat 13.5551°N, long 88.0607°W): YPM 07295, Anton A. Leenders, 11/3/2002, n=7

Gosner 39: El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Río Sapó (lat 13.5551°N, long 88.0607°W): YPM 07299, Anton A. Leenders, 11/3/2002, n=2

Gosner 44: El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Río Sapó (lat 13.5551°N, long

88.0607°W): YPM 07300, Anton A. Leenders, 11/3/2002, n=2

#### HYPEROLIIDAE

*Afrixalus paradorsalis* Perret 1960

Gosner 25–27: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08113, Anton A. Leenders 3/30/2003 n= 1

*Alexteroon obstetricans* (Ahl 1931)

Gosner 25–27: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08109, Anton A. Leenders 3/27/2003, n=2

*Hyperolius* sp. Rapp 1842

Gosner 25–27: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08103, Anton A. Leenders 3/30/2003 n= 2; YPM 08127, Anton A. Leenders 4/1/2003 n= 3

*Hyperolius ocellatus* Günther 1858

Gosner 1–18: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08101, Anton A. Leenders, 4/3/2003; YPM 08105, Anton A. Leenders, 4/3/2003

Gosner 44: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08090, Anton A. Leenders, 3/28/2003, n=1

*Kassina* sp. Girard 1853

Gosner 25–27: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08117, Anton A. Leenders 3/27/2003, n=2

*Leptopelis* sp. Günther 1859 “1858”

Gosner 25–27: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08233, Anton A. Leenders, 3/27/2003; n= 1

Gosner 28–30: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08100, Anton A. Leenders, 3/27/2003, n= 2

Gosner 31–33: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08130, Anton A. Leenders, 3/26/2003, n=3

Gosner 34–36: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08115, Anton A. Leenders, 4/3/2003, n= 1

Gosner 37–38: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08126, Anton A. Leenders, 4/1/2003, n=1

#### LEPTODACTYLIDAE

*Leptodactylus* sp. Fitzinger 1826

Gosner 28–30: Uruguay: Departamento

Rocha: Cerro Buena Vista: Barra de Valizas: YPM 09586, Jorge de Leon, 12/09/2003, n=45

#### MEGOPHRYIDAE

*Xenophrys brachykolos* (Inger and Romer 1961)

Gosner 25–27: China: Hong Kong: Lantau Island: Shek Pik: YPM 05764, Peter Lynch, 07/05/2000, n=1

Gosner 34–36: China: Hong Kong: Lantau Island: Shek Pik: YPM 05710, James Draper Lazell, Jr., 1/1/2000, n=1

*Xenophrys minor* Stejneger 1926

Gosner 25–27: China: Guangdong Province: Nan Ao Island: Jin Jiao Yi: YPM 05763, Gregory J. Watkins-Colwell and Yie De Fu, 7/30/2000, n=4

#### PELOBATIDAE

*Scaphiopus holbrookii* (Harlan 1835)

Gosner 1–18: Locality unknown: YPM 07782, Stanley C. Ball, 6/20/1935, n=19; YPM 07808, Stanley C. Ball, 6/19/1935; YPM 07810, Stanley C. Ball, 4/18/1933; YPM 07812, Stanley C. Ball, 4/19/1933;

USA: Connecticut: YPM 07681, Marshall B. Bishop, 5/4/1934; YPM 07869, Stanley C. Ball, 4/19/1933; YPM 07944, Stanley C. Ball, 4/19/1934; YPM 07945, Stanley C. Ball, 4/18/1934; YPM 07947, Stanley C. Ball, 4/19/1934; YPM 07948, Stanley C. Ball, 4/18/1934; YPM 07951, Stanley C. Ball, 4/18/1934; YPM 07953, Stanley C. Ball, 4/19/1934; YPM 07955, Stanley C.



Ball, 4/18/1934; YPM 07958–07959, Stanley C. Ball, 4/18/1934; YPM 07967, Stanley C. Ball, 4/19/1934; YPM 07969–07970, Stanley C. Ball, 4/18/1934;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 00564, Stanley C. Ball, 6/18/1935; YPM 07780, Stanley C. Ball, 6/18/1933, n=1; YPM 07797, Stanley C. Ball, 4/18/1933; YPM 07941, Stanley C. Ball, 4/19/1933; YPM 07942, Stanley C. Ball, 4/20/1933; YPM 07962, Stanley C. Ball, 4/19/1934; YPM 09028, Stanley C. Ball, 6/18/1935; YPM 00571, Stanley C. Ball, 4/18/1933;

USA: Connecticut: New Haven County: Ansonia Hotchkiss Pond (lat 41.3521°N, long 73.0735°W): YPM 00556, Stanley C. Ball, 1940; YPM 07864, Stanley C. Ball, 6/19/1935; YPM 07961, Stanley C. Ball, 4/18/1934; YPM 00560, Stanley C. Ball, 4/16/1933; YPM 00628, Stanley C. Ball, 6/18/1935; YPM 07753, Stanley C. Ball, 1940; YPM 07809, Stanley C. Ball, 6/18/1935

Gosner 19–22: Locality unknown: YPM 07798, Stanley C. Ball, 6/20/1934; YPM 07807, Stanley C. Ball, 6/20/1935, n=19;

USA: Connecticut: YPM 07870, Stanley C. Ball, 6/20/1935; YPM 07946, Stanley C. Ball, 4/19/1934, n=1; YPM 07949, Stanley C. Ball, 4/20/1934, n=3; YPM 07956, Stanley C. Ball, 4/20/1934, n=1; YPM 07963, Stanley C. Ball, 4/20/1934, n=2; YPM 07966, Stanley C. Ball, 4/19/1934, n=1;

USA: Connecticut: Middlesex County: North Plain (lat 41.4451°N, long

72.3344°W): YPM 07635, Stanley C. Ball, 8/4/1934, n=4; YPM 07636, Stanley C. Ball, 8/4/1934, n=5; YPM 07925, Stanley C. Ball, 4/19/1934 22, n=3;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 07940, Stanley C. Ball, 4/25/1933, n=8;

USA: Connecticut: New Haven County: Ansonia: Hotchkiss Pond (lat 41.3521°N, long 73.0735°W): YPM 07919, Stanley C. Ball, 4/20/1934, n=5;

USA: Connecticut: New Haven County: Westville (lat 41.1950°N, long 72.5820°W): YPM 07929, Stanley C. Ball, 4/24/1933, n=15

Gosner 23–24: Locality unknown: YPM 07805, Stanley C. Ball, 6/21/1935, n=9;

USA: Connecticut: YPM 07952, Stanley C. Ball, 4/29/1934, n=3; YPM 07954, Stanley C. Ball, 4/21/1934, n=2;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07634, Stanley C. Ball, 8/8/1934, n=3; YPM 07880, Stanley C. Ball, 4/21/1934, n=6; YPM 07911, Stanley C. Ball, 4/20/1934, n=5; YPM 07921, Stanley C. Ball, 4/20/1934, n=3;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 07803, Stanley C. Ball, 6/18/1935, n=4

Gosner 25–27: Locality unknown: YPM

07622, Stanley C. Ball, 6/24/1934, n=26;  
YPM 07778, Stanley C. Ball, 5/11/1934, n=2;

USA: Connecticut: YPM 07899, Stanley C.  
Ball, 6/28/1934, n=18; YPM 07950, Stanley  
C. Ball, 4/23/1934, n=11; YPM 07957, Stan-  
ley C. Ball, 4/24/1934, n=3; YPM 07960,  
Stanley C. Ball, 4/22/1934, n=1; YPM  
07964, Stanley C. Ball, 4/23/1934, n=1;  
YPM 07965, Stanley C. Ball, 4/25/1934,  
n=2; YPM 07971, Stanley C. Ball,  
4/27/1934, n=1;

USA: Connecticut: Middlesex County:  
North Plain (lat 41.2500°N, long  
72.2000°W): YPM 07881, Stanley C. Ball,  
4/25/1934, n=2; YPM 07882, Stanley C.  
Ball, 4/27/1934, n=4; YPM 07883, Stanley  
C. Ball, 5/11/1934, n=4; YPM 07884,  
Stanley C. Ball, 5/7/1934, n=3; YPM  
07889, Stanley C. Ball, 4/26/1934, n=2;  
YPM 07913, Stanley C. Ball, 4/28/1934,  
n=3; YPM 07914, Stanley C. Ball,  
4/22/1934, n=4; YPM 07915, Stanley C.  
Ball, 4/30/1934, n=4; YPM 07917, Stanley  
C. Ball, 4/21/1934, n=1; YPM 07918,  
Stanley C. Ball, 4/21/1934, n=5; YPM  
07920, Stanley C. Ball, 4/29/1934, n=2;  
YPM 07923, Stanley C. Ball, 5/1/1934,  
n=2; YPM 07924, Stanley C. Ball,  
5/4/1934, n=2; YPM 07926, Stanley C.  
Ball, 5/1/1934, n=3;

USA: Connecticut: New Haven County:  
Ansonia (lat 41.2046°N, long 73.0446°W):  
YPM 07817, Stanley C. Ball, 6/24/1935,  
n=3; YPM 07827, Stanley C. Ball,  
5/15/1934, n=2; YPM 07863, Stanley C.  
Ball, 6/22/1935, n=15; YPM 07887, Stanley  
C. Ball, 4/24/1934, n=2; YPM 07900, Stan-  
ley C. Ball, 4/25/1933, n=5; YPM 07922,

Stanley C. Ball, 5/13/1933, n=4; YPM  
07988, Stanley C. Ball, 7/2/1934, n=43;  
YPM 07991, Stanley C. Ball, 7/2/1934,  
n=44;

USA: Connecticut: New Haven County:  
Ansonia Hotchkiss Pond (lat 41.3521°N,  
long 73.0735°W): YPM 07990, Stanley C.  
Ball, 5/23/1934, n=11; YPM 08156, Stanley  
C. Ball, 5/24/1934, n=169;

USA: Connecticut: New Haven County:  
Westville, West Rock: YPM 07901, Stanley  
C. Ball, 4/25/1933, n=4;

USA: Connecticut: New Haven County:  
Westville (lat 41.1950°N, long 72.5820°W):  
YPM 07902, Stanley C. Ball, 5/2/1933,  
n=3; YPM 07938, Stanley C. Ball,  
5/3/1933, n=1; YPM 07939, Stanley C.  
Ball, 5/10/1933, n=9

Gosner 31–33: USA: Connecticut: YPM  
07865, Stanley C. Ball, 7/16/1934, n=3;

USA: Connecticut: Middlesex County:  
North Plain, Ball Pond (lat 41.4451°N, long  
72.3344°W): YPM 07633, Stanley C. Ball,  
8/4/1934, n=1;

USA: Connecticut: New Haven County:  
Ansonia, Hotchkiss Pond (lat 41.3521°N,  
long 73.0735°W): YPM 07682, Stanley C.  
Ball, 5/16/1934, n=6; YPM 07683, Stanley  
C. Ball, 5/16/1934, n=9;

USA: Connecticut: New Haven County:  
Westville (lat 41.1950°N, long 72.5820°W):  
YPM 08305, Stanley C. Ball, 6/5/1933, n=3

Gosner 34–36: Locality unknown: YPM

07796, Stanley C. Ball, 7/12/1934, n=1;

USA: Connecticut: YPM 08307, Stanley C. Ball, 7/16/1934, n=1;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07910, Stanley C. Ball, 5/16/1934, n=3; YPM 07916, Stanley C. Ball, 5/17/1934, n=7;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 07685, Stanley C. Ball, 6/12/1934, n=4; YPM 07799, Stanley C. Ball, 5/17/1935, n=1;

USA: Connecticut: New Haven County: Westville (lat 41.1950°N, long 72.5820°W): YPM 07928, Stanley C. Ball, 6/5/1933, n=10; YPM 07943, Stanley C. Ball, 6/12/1933, n=9

Gosner 37–38: USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07888, Stanley C. Ball, 5/16/1934, n=1;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 08250, Stanley C. Ball, 6/12/1934, n=1;

USA: Connecticut: New Haven County: Westville (lat 41.1950°N, long 72.5820°W): YPM 07930, Stanley C. Ball, 5/31/1933, n=1; YPM 07933, Stanley C. Ball, 6/30/1933, n=1; YPM 07936, Stanley C. Ball, 5/29/1933, n=2

Gosner 39: USA: Connecticut: Middlesex

County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07886, Stanley C. Ball, 5/18/1934, n=1;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 07903, Stanley C. Ball, 5/25/1933, n=1;

USA: Connecticut: New Haven County: Ansonia Hotchkiss Pond (lat 41.3521°N, long 73.0735°W): YPM 08178, Stanley C. Ball, 5/24/1934, n=3

Gosner 40: USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 00597, Stanley C. Ball; YPM 07754, Stanley C. Ball, 5/11/1934, n=1; YPM 08249, Stanley C. Ball, 6/12/1934, n=1;

USA: Connecticut: New Haven County: Ansonia Hotchkiss Pond (lat 41.3521°N, long 73.0735°W): YPM 00595, Stanley C. Ball, 5/25/1934; YPM 00596, Stanley C. Ball, 5/24/1934, n=52; YPM 00598, Stanley C. Ball, 5/25/1934; YPM 05318, Stanley C. Ball, 5/24/1934; YPM 05319, Stanley C. Ball; YPM 07783, Stanley C. Ball, 6/18/1935, n=26; YPM 08157–08175, Stanley C. Ball, 5/24/1934, n=200 each;

USA: Connecticut: New Haven County: Westville (lat 41.1950°N, long 72.5820°W): YPM 07931, Stanley C. Ball, 5/30/1933, n=1

Gosner 41: Locality unknown: YPM 07814, Stanley C. Ball, 5/5/1934, n=1;

USA: Connecticut: New Haven County:

Ansonia (lat 41.2046°N, long 73.0446°W):  
YPM 07684, Stanley C. Ball, 6/12/1934,  
n=3;

USA: Connecticut: New Haven County:  
Ansonia Hotchkiss Pond (lat 41.3521°N,  
long 73.0735°W): YPM 07978, Stanley C.  
Ball, 5/24/1934, n=3;

USA: Connecticut: YPM 08306, Stanley C.  
Ball, 7/16/1934, n=1;

USA: Connecticut: New Haven County:  
Westville (lat 41.1950°N, long 72.5820°W):  
YPM 07927, Stanley C. Ball, 6/3/1933,  
n=2; YPM 07937, Stanley C. Ball,  
5/31/1933, n=1;

Gosner 42: Locality unknown: YPM  
07788, Stanley C. Ball, 6/4/1934, n=4;  
YPM 07790, Stanley C. Ball, 5/8/1933,  
n=2; YPM 07795, Stanley C. Ball,  
5/8/1934, n=3; YPM 07800, Stanley C.  
Ball, n=1; YPM 07813, Stanley C. Ball,  
3/1934, n=1;

USA: Connecticut: YPM 07872, Stanley C.  
Ball, 7/12/1933, n=2; YPM 07890, Stanley  
C. Ball, 7/5/1934, n=1; YPM 08269, Stanley  
C. Ball, 6/28/1934, n=1;

USA: Connecticut: Middlesex County:  
North Plain (lat 41.2500°N, long  
72.2000°W): YPM 07885, Stanley C. Ball,  
5/18/1934, n=1; YPM 08304, Stanley C.  
Ball, 5/22/1934, n=1;

USA: Connecticut: New Haven County:  
Ansonia (lat 41.2046°N, long 73.0446°W):  
YPM 07686, Stanley C. Ball, 6/12/1934,  
n=17; YPM 07755, Stanley C. Ball,

7/14/1934, n=1; YPM 07779, Stanley C.  
Ball, 4/18/1933, n=1; YPM 07820, Stanley  
C. Ball, 5/24/1934, n=1; YPM 07932, Stan-  
ley C. Ball, 5/25/1933, n=1;

USA: Connecticut: New Haven County:  
Ansonia Hotchkiss Pond (lat 41.3521°N,  
long 73.0735°W): YPM 07979, Stanley C.  
Ball, 5/24/1934, n=3; YPM 08145–08155,  
Stanley C. Ball, 5/24/1934, n=1 each; YPM  
08176, Stanley C. Ball, 5/24/1934, n=1;  
YPM 08177, Stanley C. Ball, 5/24/1934,  
n=1; .

USA: Connecticut: New Haven County:  
Westville (lat 41.1950°N, long 72.5820°W):  
YPM 07579, 6/21/1933, n=1; YPM 07758,  
Stanley C. Ball, 6/21/1933, n=1; YPM  
07773, Stanley C. Ball, 5/26/1933, n=1;  
YPM 07775, Stanley C. Ball, May-33/36,  
n=1; YPM 07806, Stanley C. Ball,  
4/24/1933, n=1; YPM 07821, Stanley C.  
Ball, 4/24/1933, n=1; YPM 07822, Stanley  
C. Ball, 4/24/1933, n=1; YPM 07867, Stan-  
ley C. Ball, 6/12/1933, n=3; YPM 07868,  
Stanley C. Ball, 6/14/1933, n=1; YPM  
07934, Stanley C. Ball, 6/12/1933, n=4;  
YPM 07935, Stanley C. Ball, 6/12/1933,  
n=1

Gosner 43: Locality unknown: YPM 07776,  
Stanley C. Ball, 7/12/1934, n=1; YPM  
07786, Stanley C. Ball, 7/18/1935, n=1;  
YPM 07804, Stanley C. Ball, n=1; YPM  
07818, Stanley C. Ball, 7/13/1934, n=1;

USA: Connecticut: YPM 08270, Stanley C.  
Ball, 6/28/1934, n=1;

USA: Connecticut: New Haven County:  
Ansonia (lat 41.2046°N, long 73.0446°W):

YPM 07792, Stanley C. Ball, 4/18/1933, n=1; YPM 07802, Stanley C. Ball, 6/18/1935, n=1; YPM 07845, Stanley C. Ball, 6/19/1933, n=1; YPM 08251, Stanley C. Ball, 6/12/1934, n=7;

USA: Connecticut: New Haven County: Westville (lat 41.1950°N, long 72.5820°W): YPM 07787, Stanley C. Ball, 4/24/1933, n=2; YPM 07871, Stanley C. Ball, 6/14/1933, n=3;

USA: Connecticut: New Haven County: Westville or Ansonia: YPM 07842, Stanley C. Ball, 6/7/1933, n=1

Gosner 44: Locality unknown: YPM 07756, Stanley C. Ball, 5/23/1933, n=1; YPM 07789, Stanley C. Ball, 4/24/1933, n=4; YPM 07815, Stanley C. Ball, 6/1/1934, n=2;

USA: Connecticut: YPM 07847, Stanley C. Ball, 5/27/1933, n=1; YPM 07866, Stanley C. Ball, 6/4/1934, n=3;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 07850, Stanley C. Ball, 6/11/1933, n=2; YPM 07852, Stanley C. Ball, 6/27/1933, n=1; YPM 07968, Stanley C. Ball, 6/21/1933, n=2; YPM 08252, Stanley C. Ball, 6/12/1934, n=3;

USA: Connecticut: New Haven County: Westville or Ansonia: YPM 07577, 7/11/1933, n=1; YPM 07578, 6/23/1933, n=2; YPM 07774, Stanley C. Ball, 6/19/1933, n=1; YPM 07781, Stanley C. Ball, 6/21/1933, n=1; YPM 07791, Stanley C. Ball, 6/22/1933, n=1; YPM 07861, Stanley C. Ball, 6/21/1933, n=3

Gosner 45: Locality unknown: YPM 07811, Stanley C. Ball, 7/18/1934, n=1;

USA: Connecticut: YPM 07844, Stanley C. Ball, 6/8/1933, n=1; YPM 07858, Stanley C. Ball, 6/29/1933, n=4; YPM 07876, Stanley C. Ball, 6/28/1934 21, n=12; YPM 07891, Stanley C. Ball, 6/26/1934, n=13; YPM 07904, Stanley C. Ball, 6/28/1934, n=7; YPM 07909, Stanley C. Ball, 7/11/1934, n=15; YPM 08290, Stanley C. Ball, 6/26/1934, n=1; YPM 08292, Stanley C. Ball, 7/11/1934, n=1; YPM 08294, Stanley C. Ball, 7/11/1934, n=1; YPM 08295, Stanley C. Ball, 7/11/1934, n=1; YPM 08303, Stanley C. Ball, 7/11/1934, n=1;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07912, Stanley C. Ball, 5/22/1934, n=4;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 07819, Stanley C. Ball, 5/15/1934, n=1; YPM 07851, Stanley C. Ball, 6/5/1933, n=1; YPM 07860, Stanley C. Ball, 5/8/1933, n=3; YPM 08271, Stanley C. Ball, 6/15/1933, n=1; YPM 08272, Stanley C. Ball, 6/15/1933, n=1;

USA: Connecticut: New Haven County: Westville (lat 41.1950°N, long 72.5820°W): YPM 07857, Stanley C. Ball, 6/28/1933, n=7; YPM 08268, Stanley C. Ball, 4/24/1933, n=1;

USA: Connecticut: New Haven County: Westville or Ansonia: YPM 07576, 6/23/1933, n=2; YPM 07582, 6/23/1933, n=7; YPM 07856, Stanley C. Ball,

4/18/1933, n=9; YPM 07859, Stanley C. Ball, 6/15/1933, n=3

Gosner 46: Locality unknown: YPM 07759, Stanley C. Ball, 7/18/1934, n=1; YPM 07760–07772, Stanley C. Ball, 7/18/1934, n=1 each; YPM 07777, Stanley C. Ball, 5/14/1934, n=1; YPM 07801, Stanley C. Ball, 4/24/1933, n=1; YPM 07823, Stanley C. Ball, 7/27/1934, n=1; YPM 07824, Stanley C. Ball, 7/18/1934, n=6; YPM 07825, Stanley C. Ball, 7/18/1934, n=3; YPM 07826, Stanley C. Ball, 7/18/1934, n=4;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07725, Stanley C. Ball, 4/4/1934, n=2; YPM 08445–08455, Stanley C. Ball, 4/27/1934, n=1 each;

USA: Connecticut: New Haven County: Ansonia (lat 41.2046°N, long 73.0446°W): YPM 07575, 7/1/1933, n=1; YPM 07828, Stanley C. Ball, 6/18/1933, n=1; YPM 07829, Stanley C. Ball, 6/15/1933, n=4; YPM 07846, Stanley C. Ball, 6/6/1933, n=1; YPM 07892, Stanley C. Ball, 7/11/1934, n=13; YPM 07985, Stanley C. Ball, 7/18/1934, n=7; YPM 07989, Stanley C. Ball, 7/2/1934, n=1; YPM 08312, Stanley C. Ball, 6/11/1933, n=1; YPM 08497–08502, Stanley C. Ball, 7/18/1934, n=1 each;

USA: Connecticut: New Haven County: Westville (lat 41.1950°N, long 72.5820°W): YPM 07580, 6/27/1933, n=2; YPM 07581, 6/27/1933, n=2; YPM 07757, Stanley C. Ball, 7/6/1933, n=1; YPM 07843, Stanley C. Ball, 7/10/1933, n=1; YPM 07848, Stanley C. Ball, 6/23/1933, n=1; YPM 07849, Stan-

ley C. Ball, 7/4/1933, n=2; YPM 08340–8345, Stanley C. Ball, 6/28/1933, n=1 each;

USA: Connecticut: New Haven County: Westville or Ansonia: YPM 07862, Stanley C. Ball, 6/21/1933, n=6; YPM 08308, Stanley C. Ball, 6/15/1933, n=1; YPM 08309, Stanley C. Ball, 6/15/1933, n=1; YPM 08315, Stanley C. Ball, 6/21/1933, n=1; YPM 08316, Stanley C. Ball, 6/21/1933, n=1; YPM 08371–08375, Stanley C. Ball, 6/21/1933, n=1 each; YPM 08433–08444, Stanley C. Ball, 7/11/1934, n=1 each; YPM 08456–08463, Stanley C. Ball, 4/18/1933, n=1 each;

USA: Connecticut: YPM 07873, Stanley C. Ball, 5/24/1933, n=3; YPM 07874, Stanley C. Ball, 6/22/1933, n=1; YPM 07875, Stanley C. Ball, 6/26/1934, n=36; YPM 07877, Stanley C. Ball, 6/26/1934, n=18; YPM 07878, Stanley C. Ball, 6/28/1934, n=13; YPM 07879, Stanley C. Ball, 6/28/1934, n=18; YPM 07893, Stanley C. Ball, 6/26/1934, n=24; YPM 07894, Stanley C. Ball, 6/28/1934, n=13; YPM 07895, Stanley C. Ball, 6/28/1934, n=20; YPM 07896, Stanley C. Ball, 6/28/1934, n=18; YPM 07897, Stanley C. Ball, 6/26/1934, n=22; YPM 07898, Stanley C. Ball, 6/26/1934, n=15; YPM 07905, Stanley C. Ball, 6/26/1934, n=12; YPM 07906, Stanley C. Ball, 6/26/1934, n=6; YPM 07907, Stanley C. Ball, 7/14/1934, n=1; YPM 07908, Stanley C. Ball, 6/26/1934, n=7; YPM 07980, Stanley C. Ball, 7/24/1934, n=7; YPM 07981, Stanley C. Ball, 7/18/1934, n=14; YPM 07982, Stanley C. Ball, 7/25/1934, n=12; YPM 07983, Stanley C. Ball, 7/25/1934, n=5; YPM 07984, Stanley C. Ball,

7/25/1934, n = 3; YPM 07986, Stanley C. Ball, 7/25/1934, n=5; YPM 07987, Stanley C. Ball, 7/25/1934, n=13; YPM 08273–08274, Stanley C. Ball, 6/29/1933, n=1 each; YPM 08275–08279, Stanley C. Ball, 6/28/1933, n=1 each; YPM 08280–08289, Stanley C. Ball, 6/26/1934, n=1 each; YPM 08281–08289, Stanley C. Ball, 6/26/1934, n=1 each; YPM 08291–08302, Stanley C. Ball, 7/11/1934, n=1 each; YPM 08310–08314, Stanley C. Ball, 5/24/1934, n=1 each; YPM 08317–08321, Stanley C. Ball, 6/26/1933, n=1 each; YPM 08322–08339, Stanley C. Ball, 7/25/1934, n=1 each; YPM 08346–08370, Stanley C. Ball, 6/26/1934, n=1 each; YPM 08376–08379, Stanley C. Ball, 7/14/1934, n=1 each; YPM 08380–08387, Stanley C. Ball, 7/18/1934, n=1 each; YPM 08388–08391, Stanley C. Ball, 7/25/1934, n=1 each; YPM 08392–08397, Stanley C. Ball, 6/26/1934, n=1 each; YPM 08398–08432, Stanley C. Ball, 6/28/1934, n=1 each; YPM 08464–08476, Stanley C. Ball, 6/26/1934, n=1 each; YPM 08478–08490, Stanley C. Ball, 6/28/1934, n=1 each; YPM 08491–08496, Stanley C. Ball, 7/24/1934, n=1 each; YPM 08503–08523, Stanley C. Ball, 6/26/1934, n=1 each; YPM 08524–08542, Stanley C. Ball, 6/28/1934, n=1 each; YPM 08543–08576, Stanley C. Ball, 6/26/1934, n=1 each; YPM 08577–08589, Stanley C. Ball, 7/18/1934, n=1 each; YPM 08590–08606, Stanley C. Ball, 6/28/1934, n=1 each; YPM 08607–08623, Stanley C. Ball, 6/26/1934, n=1 each; YPM 08624–08634, Stanley C. Ball, 7/25/1934, n=1 each

*Spea multiplicata* (Cope 1863)

Gosner 41: USA: Arizona: Pima County: Tucson (lat 32.1300°N, long 110.5500°W): YPM 06291, H. S. Gentry, 9/15/1933, n=7

Gosner 42: Mexico: Distrito Federal: Teotihuacan (lat 19.4200°N, long 98.5100°W): YPM 05022, Garber, Steve D. 8/9/1975, n=1;

USA: Arizona: Pima County: Tucson (lat 32.1300°N, long 110.5500°W): YPM 09503, H. S. Gentry, 9/15/1933, n=19

#### PIPIIDAE

*Xenopus* sp. Wagler 1827

Gosner 25–27: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08114, Anton A. Leenders, 4/1/2003, n=2

#### RANIDAE

*Paa exilispinosa* (Liu and Hu 1975)

Gosner 34–36: China: Hong Kong: Lantau Island: Keung Shan: YPM 05709, James Draper Lazell, Jr., 12/27/1999, n=1

Gosner 46: China: Hong Kong: Lantau Island: Keung Shan: YPM 05705, James Draper Lazell, Jr., 12/27/1999, n=1

*Ptychadena aequiplicata* (Werner 1898)

Unstaged egg or egg mass: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08102, Anton A. Leenders, 4/1/2003; YPM 08104, Anton A. Leenders, 3/30/2003; YPM 08119, Arnold Leenders, 3/27/2003; YPM 08122, Anton A. Leenders, 3/30/2003; YPM 08123, Anton A. Leenders, 4/1/2003; YPM 08128, Anton A. Leenders, 3/30/2003

Gosner 1–18: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08234, Anton A. Leenders, 4/2/2003; n= 1

Gosner 19–22: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08106, Anton A. Leenders, 4/2/2003, n=30; YPM 08120, Anton A. Leenders 3/30/2003, n=42

Gosner 25–27: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08110, Anton A. Leenders 3/27/2003 n= 8; YPM 08111, Anton A. Leenders 3/30/2003 n= 18; YPM 08121, Anton A. Leenders 3/30/2003 n= 21; YPM 08129, Anton A. Leenders 3/31/2003 n= 10

Gosner 28–30: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08108, Anton A. Leenders 3/30/2003, n=53

Gosner 37–38: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08112, Anton A. Leenders 3/31/2003 n= 4

Gosner 41: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08232, Anton A. Leenders 3/31/2003 n= 1

*Rana berlandieri* Baird 1859

Gosner 39: Mexico: Veracruz State: Ver-

acruz (lat 19.1100°N, long 96.1000°W): YPM 03628, Marshall B. Bishop, 4/10/1932, n=1

Gosner 41: Mexico: Veracruz State: Veracruz (lat 19.1100°N, long 96.1000°W): YPM 03629, Marshall B. Bishop, 4/10/1932, n=1

*Rana catesbeiana* Shaw 1802

Gosner 25–27: USA: Connecticut: New Haven County: Ansonia: YPM 06995, Donna Lindgren, 7/13/2002; YPM 06996, Donna Lindgren, 7/13/2002; YPM 06998, Donna Lindgren, 7/13/2002 101142; YPM 06999, Donna Lindgren, 7/13/2002; YPM 07000, Donna Lindgren, 7/13/2002;

USA: Connecticut: New London County: Voluntown: YPM 07190, Edward Natoli and Kim Hargrave, 5/11/2002, n=2;

USA: Maine: Somerset County: The Forks Plantation: YPM 08681, Anton A. Leenders, 6/2/2003, n=1

Gosner 28–30: USA: Connecticut: New Haven County: Ansonia: YPM 06997, Donna Lindgren, 7/13/2002; YPM 07001, Donna Lindgren, 7/13/2002

Gosner 34–36: USA: Connecticut: Fairfield County: Fairfield: YPM 09157, Gregory J. Watkins-Colwell and Daniel Jonathon Drew, 8/12/2003, n=1

Gosner 37–38: USA: Connecticut: New Haven County: Ansonia: YPM 07003, Donna Lindgren, 7/13/2002;

USA: Connecticut: New London County:



Lyme: YPM 07201, Edward Natoli, 8/3/2002,  
n=1

Gosner 39: USA: Maine: Somerset County:  
The Forks Plantation: YPM 08682, Anton  
A. Leenders, 6/2/2003, n=1

Gosner 40: USA: Connecticut: New Haven  
County: Woodbridge (lat 41.2109°N, long  
73.0032°W): YPM 01007, Marshall B.  
Bishop, 5/29/1936

Gosner 41: Locality unknown: YPM 06652,  
S Herrick, 5/19/2002, n=1;

USA: Connecticut: New Haven County:  
Ansonia: YPM 07002, Donna Lindgren,  
7/13/2002; YPM 07004, Donna Lindgren,  
7/13/2002;

USA: Connecticut: New London County:  
Voluntown: YPM 07189, Edward Natoli  
and Kim Hargrave, 5/11/2002, n=1

Gosner 42: USA: Connecticut: New Lon-  
don County: Norwich: YPM 06687, 8/2001,  
n=1

Gosner 43: USA: Connecticut: New Haven  
County: New Haven (lat 41.1829°N, long  
72.5543°W): YPM 01121, Wesley Roswell  
Coe, n=1

Gosner 45: USA: Maine: Somerset County:  
The Forks Plantation: YPM 07047, Daniel  
Jonathon Drew, 8/10/2002, n=1

Gosner 46: USA: Connecticut: Fairfield  
County: Stratford (lat 41.1536°N, long  
0730714°W): YPM 09029, Gregory J.  
Watkins-Colwell, 7/28/2003, n=1

*Rana clamitans* Latreille 1801

Gosner 25–27: USA: Connecticut: Fairfield  
County: Fairfield: YPM 09158, Gregory J.  
Watkins-Colwell and Daniel Jonathon  
Drew, 8/12/2003, n=1;

USA: Connecticut: Litchfield County:  
Cornwall: West Cornwall: YPM 09534,  
Anton A. Leenders, 10/18/2003, n=16;

USA: Connecticut: New Haven County:  
Woodbridge (lat 41.2109°N, long  
73.0032°W): YPM 01112, Marshall B.  
Bishop, 9/13/1930, n=17;

USA: Connecticut: New London County:  
New London: YPM 09163, Gregory J.  
Watkins-Colwell and Anton A. Leenders and  
Hank Gruner and Richard Haley and Daniel  
Jonathon Drew and Brian Roach and Bryan  
Goff and Casey Redington, 6/6/2003

Gosner 28–30: USA: Connecticut: Middle-  
sex County: Haddam: YPM 06657, Donna  
Lindgren, 5/19/2002, n=1;

USA: Connecticut: Middlesex County:  
Lyme: YPM 07183, Hank Gruner and Ed-  
ward Natoli, 5/11/2002, n=3;

USA: Connecticut: New Haven County:  
Seymour: YPM 07076, Ingrid Davis,  
9/15/2002, n=1;

USA: Connecticut: New Haven County:  
Woodbridge (lat 41.2105°N, long  
72.5850°W): YPM 07699, Stanley C. Ball  
and Marshall B. Bishop, 3/7/1934, n=13;  
YPM 09578, Marshall B. Bishop,  
9/13/1930, n=3

Gosner 31–33: USA: Connecticut: New Haven County: Woodbridge (lat 41.2105°N, long 72.5850°W): YPM 08257, Stanley C. Ball and Marshall B. Bishop, 3/7/1934, n=5; YPM 09575, Marshall B. Bishop, 9/13/1930, n=3;

USA: Connecticut: New London County: Colchester: YPM 07195, Hank Gruner, 5/11/2002, n=1

Gosner 34–36: USA: Connecticut: Hartford County: East Windsor: YPM 06705, Eric Davison, 5/2002, n=1;

USA: Connecticut: New Haven County: Hamden: Brooksvale Park: YPM 09114, Maxim Shpak, 3/18/2003, n=1;

USA: Connecticut: New Haven County: Woodbridge (lat 41.2105°N, long 72.5850°W): YPM 08258, Stanley C. Ball and Marshall B. Bishop, 3/7/1934, n=3; YPM 09576, Marshall B. Bishop, 9/13/1930, n=1;

USA: Connecticut: New London County: New London: YPM 08860, Anton A. Leenders and Casey Redington, 6/7/2003, n=1;

USA: Connecticut: New London County: Norwich: YPM 06714, Gregory J. Watkins-Colwell and Daniel Jonathon Drew, 6/1/2002, n=1;

USA: Connecticut: Windham County: Killingly: YPM 06697, Richard Haley, 5/19/2002, n=3

Gosner 37–38: USA: Connecticut: Fairfield County: Danbury (lat 41.2240°N, long

73.2717°W): YPM 05925, Gregory J. Watkins-Colwell and Richard Haley, 6/9/2001, n=1; YPM 05926, Noah Gordon and Patrick Owen, 6/9/2001, n=1;

USA: Connecticut: Fairfield County: Fairfield: YPM 08231, Gregory J. Watkins-Colwell, 5/26/1999, n=4;

USA: Connecticut: Windham County: Killingly: YPM 06696, Richard Haley, 5/19/2002, n=1; YPM 06699, Richard Haley, 5/19/2002, n=1

Gosner 39: USA: Connecticut: Windham County: Killingly: YPM 06695, Richard Haley, 5/19/2002, n=1; YPM 06700, Richard Haley, 5/19/2002, n=1

Gosner 41: USA: Connecticut: Middlesex County: Haddam: YPM 06641, Hank Gruner and W Wilcox, 5/11/2002, n=1

Gosner 43: USA: Connecticut: Fairfield County: Danbury (lat 41.2240°N, long 73.2717°W): YPM 05927, Noah Gordon and Patrick Owen, 6/9/2001, n=1;

USA: Connecticut: Fairfield County: Fairfield: YPM 05924, 10/2000, n=1 (specimen amelanistic)

Gosner 44: USA: Connecticut: New Haven County: Woodbridge: Bishop's Pond (lat 41.2109°N, long 73.0032°W): YPM 09577, Marshall B. Bishop, 9/13/1930, n=1

Gosner 45: USA: Connecticut: Middlesex County: North Plain (lat 41.4451°N, long 72.3344°W): YPM 07631, Stanley C. Ball, 8/8/1934, n=1

Gosner 46: USA: Connecticut: Fairfield County: Stratford: (lat 41.1536°N, long 73.0714°W): YPM 09024–09025, Gregory J. Watkins-Colwell, 7/22/2003, n=1 each; YPM 09316, Gregory J. Watkins-Colwell, 8/7/2003, n=1;

USA: Connecticut: Fairfield County: Weston (lat 41.1414°N, long 73.2345°W): YPM 08230, Gregory J. Watkins-Colwell, 4/7/1999, n=1;

USA: Connecticut: New Haven County: Guilford: Peabody Field Station on Leetes Island Road: YPM 09149, Gregory J. Watkins-Colwell, 8/6/2003, n=1;

USA: Connecticut: New Haven County: Seymour: YPM 07071, Ingrid Davis, 9/15/2002, n=1

*Rana graeca* Boulenger 1891

Gosner 19–22: Greece: Phokis Mount Vardusia: Pitimalico: YPM 07837, George E. Watson III, 7/14/1959, n=2

*Rana grylio* Stejneger 1901

Gosner 25–27: USA: Florida: Volusia County: Lake Helen: Cassadaga (lat 28.5907°N, long 81.1349°W): YPM 01053, Marshall B. Bishop, 3/30/1934, n=13

Gosner 34–36: USA: Florida: Volusia County: Lake Helen: Cassadaga (lat 28.5907°N, long 81.1349°W): YPM 09571, Marshall B. Bishop, 3/30/1934, n=1; YPM 09572, Marshall B. Bishop, 3/30/1934, n=1

Gosner 41: USA: Florida: Volusia County:

Lake Helen: Cassadaga (lat 28.5907°N, long 81.1349°W): YPM 09573, Marshall B. Bishop, 3/30/1934, n=1

Gosner 42: USA: Florida: Volusia County: Lake Helen: Cassadaga (lat 28.5907°N, long 81.1349°W): YPM 09574, Marshall B. Bishop, 3/30/1934, n=1

*Rana luzonensis* Boulenger 1896

Gosner 25–27: Philippines: Luzon: Ifugao Province: Banaue Municipality: YPM 07839: Harold C. Conklin and L. Buwaya and B. Tindungen 12/10/1982, n=1; YPM 07841 Harold C. Conklin and L. Buwaya and B. Tindungen 12/14/1982, n=1

*Rana maculata* Brocchi 1877

Gosner 1–18: El Salvador: Departamento Ahuachapán: Municipio San Francisco Menendez: Cantón Escoroso: Parque Nacional El Imposible, Sector La Fincona: YPM 06472, Anton A. Leenders, 12/21/2001, n=4;

El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Bailadero del Diablo (lat 13.5732°N, long 88.0757°W): YPM 07308, Anton A. Leenders, 11/8/2002, n=1; YPM 07309, Vladlein Henriquez, 11/8/2002, n=1; YPM 07310, Anton A. Leenders, 11/8/2002, n=1; YPM 07311, Kathia Gomez, 11/8/2002, n=1; YPM 07312, Anton A. Leenders, 11/8/2002, n=1

Gosner 19–22: El Salvador: Departamento Ahuachapán: Municipio San Francisco Menendez: Cantón Escoroso: Parque Na-

cional el Imposible, Sector San Benito (lat 18.8231°N, long 89.9427°W): YPM 07285, Anton A. Leenders, 10/25/2002, n=28

Gosner 23–24: El Salvador: Departamento Ahuachapán: Municipio San Francisco Menendez: Cantón Escoroso: Parque Nacional el Imposible, Sector San Benito (lat 18.82309°N, long 89.94272°W): YPM 06469, Anton A. Leenders, 1/6/2002, n=12

Gosner 25–27: El Salvador: Departamento Ahuachapán: Municipio San Francisco Menendez: Cantón Escoroso: Parque Nacional El Imposible, Sector La Fincona: YPM 06459, Anton A. Leenders, 12/20/2002, n=1; YPM 06461, Maxim Shpak, 12/23/2001, n=5; YPM 06463, Anton A. Leenders and Maxim Shpak, 12/20/2001, n=9; YPM 06464, Anton A. Leenders, 12/21/2001, n=9; YPM 06465, Anton A. Leenders, 2/12/2002, n=6; YPM 06467, Anton A. Leenders, 12/21/2001, n=5; YPM 06468, Anton A. Leenders, 12/21/2001, n=4;

El Salvador: Departamento Ahuachapán: Municipio San Francisco Menendez: Cantón Escoroso: Parque Nacional el Imposible, Sector San Benito (lat 18.82309°N, long 89.94272°W): YPM 06440, Fanny Flores, 1/7/2002, n=1; YPM 06460, Fanny Flores, 1/7/2002, n=5; YPM 06462, Fanny Flores, 1/7/2002, n=1; YPM 06466, Anton A. Leenders, 1/3/2002, n=5; YPM 06469, Anton A. Leenders, 1/6/2002, n=12; YPM 06470, Anton A. Leenders, 1/7/2002, n=1; YPM 06471, Maxim Shpak, 12/21/2001, n=6; YPM 07283, Anton A. Leenders, 10/25/2002, n=9; YPM 07284, Anton A. Leenders, 10/25/2002, n=10;

El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Bailadero del Diablo (lat 13.5732°N, long 88.0757°W): YPM 07303, Anton A. Leenders, 11/8/2002, n=17; YPM 07306, Vladlein Henriquez, 11/8/2002, n=7; YPM 07304, Anton A. Leenders, 11/8/2002, n=12; YPM 07305, Anton A. Leenders, 11/8/2002, n=8; YPM 07307, Vladlein Henriquez, 11/8/2002, n=8;

El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Río Sapó (lat 13.5551°N, long 88.0607°W): YPM 07301, Anton A. Leenders, 11/3/2002, n=1

Gosner 28–30: El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Río Sapó (lat 13.5551°N, long 88.0607°W): YPM 07302, Anton A. Leenders, 11/3/2002, n=1

Gosner 37–38: El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Bailadero del Diablo (lat 13.5732°N, long 88.0757°W): YPM 07282, Vladlein Henriquez, 11/8/2002, n=1

Gosner 39: El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Río Sapó (lat 13.5551°N, long 88.0607°W): YPM 07281, Anton A. Leenders, 11/7/2002, n=1

Gosner 41: El Salvador: Departamento Morazán: Municipio Arambala: Cantón Cumaro: Bailadero del Diablo (lat 13.5732°N, long 88.0757°W): YPM 07280, Vladlein Henriquez, 11/8/2002, n=1

Gosner 45: El Salvador: Departamento

Morazán: Municipio Arambala: Cantón Cumaro: Rio Sapo (lat 13.5551°N, long 88.0607°W): YPM 07269, Vladlein Henriquez, 11/7/2002, n=1

*Rana palustris* LeConte 1825

Gosner 25–27: USA: Connecticut: Fairfield County: Fairfield: Connecticut Audubon Center: YPM 09022, Daniel Jonathon Drew and Sarah McGann, 7/18/2003, n=6;

USA: Connecticut: New Haven County: Woodbridge: Race Brook (lat 41.2109°N, long 73.0032°W): YPM 08235, Marshall B. Bishop, 7/16/1930, n=1;

USA: Connecticut: New London County: Colchester: YPM 09558, Edward Natoli, 5/17/2003, n=3;

USA: Connecticut: New London County: Voluntown: YPM 07204, Kim Hargrave, 8/1/2002, n=4;

USA: Connecticut: Tolland County: Mansfield: YPM 07145, Jean Phillips, 7/28/2002, n=6; YPM 07159, Heather A. Fried, 7/28/2002, n=2

Gosner 28–30: USA: Connecticut: New London County: Colchester: YPM 09559, Edward Natoli, 5/17/2003, n=3

Gosner 34–36: USA: Connecticut: Litchfield County: Norfolk: YPM 07006, Joseph Markow and Jennifer Markow, 7/14/2002, n=3;

USA: Connecticut: New Haven County: Woodbridge: Race Brook (lat 41.2109°N,

long 73.0032°W): YPM 08236, Marshall B. Bishop, 7/16/1930, n=2

Gosner 37–38: USA: Connecticut: New Haven County: Woodbridge: Race Brook (lat 41.2109°N, long 73.0032°W): YPM 08237, Marshall B. Bishop, 7/16/1930, n=1

Gosner 39: USA: Connecticut: New Haven County: Woodbridge: Race Brook (lat 41.2109°N, long 73.0032°W): YPM 08238, Marshall B. Bishop, 7/16/1930, n=2

Gosner 41: USA: Connecticut: New Haven County: Woodbridge: Race Brook (lat 41.2109°N, long 73.0032°W): YPM 08239, Marshall B. Bishop, 7/16/1930, n=2

Gosner 44: USA: Connecticut: New Haven County: Woodbridge: Race Brook (lat 41.2109°N, long 73.0032°W): YPM 01090, Marshall B. Bishop, 7/16/1930

*Rana pipiens* Schreber 1782

Gosner 46: Locality unknown: YPM 07617, Stanley C. Ball, 7/5/1934, n=1; YPM 07972, n=1; YPM 07973, n=1; YPM 07974, n=1; YPM 07975, n=1; YPM 07976, n=1; YPM 07977, n=1

*Rana septentrionalis* Baird 1854

Gosner 1–18: Canada: Quebec: Gaspé Peninsula (lat 48.5000°N, long 64.3600°W): YPM 01073, Stanley C. Ball and Palmer, May 1938

*Rana sphenoccephala* Cope 1886

Gosner 25–27: USA: Florida: LaCosta Is-

land: YPM 04650, Marshall B. Bishop,  
7/7/1938, n=4;

USA: Florida: Broward County: Fort Laud-  
erdale: YPM 07703, Marshall B. Bishop,  
3/5/1938, n=9

Gosner 28–30: USA: Florida: LaCosta Is-  
land: YPM 09584, Marshall B. Bishop,  
7/7/1938, n=1

Gosner 31–33: USA: Florida: LaCosta Is-  
land: YPM 09585, Marshall B. Bishop,  
7/7/1938, n=1

Gosner 37–38: USA: Florida: Broward  
County: Fort Lauderdale: YPM 08265,  
Marshall B. Bishop, 5/3/1938, n=1

*Rana sylvatica* LeConte 1825

Gosner 1–18: Locality unknown: YPM  
01089, Stanley C. Ball, 3/19/1935; USA  
Connecticut: Litchfield County: Morris:  
YPM 08224, Anton A. Leenders, 5/23/2003,  
n=4;

USA: Connecticut: New Haven County:  
West Haven (lat 41.1614°N, long  
72.5651°W): YPM 07690, R. C. M.,  
3/18/1935, n=13; YPM 07691, Stanley C.  
Ball, 3/23/1935, n=36; YPM 07692, Stanley  
C. Ball, 3/23/1935, n=24; YPM 07693, Stan-  
ley C. Ball, 3/23/1935, n=20

Gosner 19–22: USA: Connecticut: Middle-  
sex County: North Plain: YPM 07599,  
Stanley C. Ball, 4/30/1933, n=57;

USA: Connecticut: New Haven County:  
West Haven (lat 41.1614°N, long

72.5651°W): YPM 07695, Stanley C. Ball,  
3/27/1935, n=8

Gosner 23–24: USA: Connecticut: Litch-  
field County: Morris: YPM 07833, Anton  
A. Leenders, 4/20/2003, n=3;

USA: Connecticut: New Haven County:  
West Haven (lat 41.1614°N, long  
72.5651°W): YPM 07694, Stanley C. Ball,  
3/28/1935, n=8

Gosner 25–27: Locality unknown: YPM  
07597, Stanley C. Ball, 4/4/1935, n=7; YPM  
07598, Stanley C. Ball and R. C. M.  
3/30/1935, n=10;

Canada: Quebec: Gaspé: Peninsula Cap aux  
Os: YPM 07643, Stanley C. Ball and Donat  
Fertin, 6/22/1936, n=3;

USA: Connecticut: Fairfield County: Dan-  
bury (lat 41.2240°N, long 73.2717°W):  
YPM 05940, Gregory J. Watkins-Colwell  
and Hank Gruner, 6/9/2001, n=1;

USA: Connecticut: Litchfield County:  
Canaan (lat 41.5921°N, long 73.2116°W):  
YPM 08033, Anton A. Leenders, 5/7/2003,  
n=16;

USA: Connecticut: Litchfield County: Mor-  
ris: YPM 06632, Gregory J. Watkins-Col-  
well, 5/18/2002, n=1; YPM 06633, Gregory  
J. Watkins-Colwell and Anton A. Leenders,  
5/19/2002, n=2; YPM 08223, Anton A.  
Leenders, 5/19/2003, n=9; YPM 07834,  
Anton A. Leenders, 4/26/2003, n=10;

USA: Connecticut: Litchfield County: Nor-  
folk: YPM 06654, Joseph Markow

5/19/2002, n=2; YPM 06658, Joseph Markow 5/19/2002, n=2;

USA: Connecticut: Middlesex County: Haddam: YPM 06640, Hank Gruner and W. Wilcox 5/11/2002, n=5;

USA: Connecticut: New London County: Lyme: YPM 07181, Hank Gruner and Edward Natoli, 5/11/2002, n=1; YPM 07192, Hank Gruner and Edward Natoli, 5/11/2002, n=3;

USA: Connecticut: New London County: Norwich (lat 41.54892 W72.07358°W): YPM 06716, 6/1/2002, n=2;

USA: Connecticut: Tolland County: Mansfield: YPM 06643, Heather A. Fried, 5/19/2002, n=2

Gosner 28–30: USA: Connecticut: Hartford County: East Windsor: YPM 06706, Eric Davison 5/2002, n=12;

USA: Connecticut: Middlesex County: Haddam: YPM 06653, Hank Gruner, 5/11/2002, n=5;

USA: Connecticut: New London County: Colchester: YPM 07185, Hank Gruner, 5/11/2002, n=5; YPM 07187, Hank Gruner, 5/11/2002, n=5;

USA: Connecticut: New London County: Lyme: YPM 07184, Hank Gruner and Edward Natoli, 5/11/2002, n=7;

USA: Connecticut: Tolland County: Mansfield: YPM 06644, Heather A. Fried, 5/19/2002, n=2; YPM 08134, Anton A. Leenders, 5/10/2003, n=8;

USA: Connecticut: Windham County: Killingly: YPM 06701, Richard Haley, 5/19/2002, n=4

Gosner 31–33: Canada: Quebec: Gaspé: Peninsula Cap aux Os: YPM 07640, H. Trapido, 6/22/1936, n=7;

USA: Connecticut: New Haven County: Seymour: YPM 06655, Chris Clark, 5/19/2002, n=3;

USA: Connecticut: Tolland County: Mansfield: YPM 06642, Jean Phillips 5/19/2002, n=2; YPM 08212, Gregory J. Watkins-Colwell and Anton A. Leenders, 5/17/2003, n=238

Gosner 34–36: USA: Connecticut: Fairfield County: Monroe: YPM 06669, Brian Roach 5/19/2002, n=2;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07596, Stanley C. Ball, 8/1/1932, n=3;

USA: Connecticut: New London County: New London: YPM 08861, Gregory J. Watkins-Colwell and Anton A. Leenders and Hank Gruner and Richard Haley and Daniel Jonathon Drew and Brian Roach and Bryan Goff and Casey Redington, 6/6/2003, n=35; YPM 08858, Anton A. Leenders and Casey Redington, 6/7/2003, n=2;

USA: Connecticut: New London County: Norwich (lat 41.54892 W72.07358°W): YPM 06707, Gregory J. Watkins-Colwell and James Sirch and Daniel Jonathon Drew and Brian Roach, 6/1/2002, n=21;

USA: Connecticut: Tolland County (lat 41.4502°N, long 72.2409°W): YPM 08921, Gregory J. Watkins-Colwell and Anton A. Leenders, 6/29/2003, n=7; YPM 08922, Gregory J. Watkins-Colwell and Anton A. Leenders, 6/29/2003, n=1;

USA: Connecticut: Windham County: Killingly: YPM 06703, Richard Haley, 5/19/2002, n=1

Gosner 37–38: USA: Connecticut: New London County: New London: YPM 08859, Anton A. Leenders and Casey Redington, 6/7/2003, n=5

Gosner 40: Canada: Quebec: Gaspé: Peninsula Cap aux Os: YPM 07639, Donat Fertin, 7/8/1936, n=4;

Canada: Quebec: Gaspé: West Highlands: YPM 07642, Stanley C. Ball, 7/30/1938, n=3;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 08253, Stanley C. Ball, 6/1934, n=1;

USA: Connecticut: Tolland County: Mansfield: YPM 08641, Gregory J. Watkins-Colwell and Anton A. Leenders, 5/27/2003, n=7; YPM 08642, Gregory J. Watkins-Colwell and Anton A. Leenders, 5/29/2003, n=6

Gosner 41: Canada: Quebec: Gaspé: West Highlands: YPM 08242, Stanley C. Ball, 8/1/1938, n=1;

USA: Connecticut: Litchfield County: Morris (lat 41.71356 W73.16518°W): YPM

07027, Elisa Scholsohn, 7/14/2002, n=1; YPM 07030, Elisa Scholsohn, 7/14/2002, n=1;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07696, Stanley C. Ball, 6/1/1934, n=19

Gosner 42: Canada: Quebec: Grande Grève: Gaspé “The Tub, West Highlands”: YPM 07644, Stanley C. Ball, 8/1/1938, n=9  
USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 08254, Stanley C. Ball, 6/1934, n=12

Gosner 43: Canada: Quebec: Gaspé: West Highlands: YPM 08243, Stanley C. Ball, 8/1/1938, n=1

Gosner 45: USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 08894, Anton A. Leenders, 6/17/2003, n=2

Gosner 46: Locality unknown: YPM 07638, H. Trapido, 10/27/1938, n=1;

USA: Connecticut: West Bourgaize Pond: YPM 07641, Stanley C. Ball, 8/13/1934, n=2;

USA: Connecticut: Fairfield County: Stratford (lat 41.1536°N, long 73.0714°W): YPM 08927, Gregory J. Watkins-Colwell, 7/7/2003, n=1; YPM 08928, Gregory J. Watkins-Colwell, 7/8/2003, n=1; YPM 08931, Gregory J. Watkins-Colwell, 7/9/2003, n=1; YPM 09023, Gregory J. Watkins-Colwell, 7/22/2003, n=1; YPM 09031–09032, Gregory J. Watkins-Colwell,



7/26/2003, n=1 each; YPM 09039, Gregory J. Watkins-Colwell, 7/25/2003, n=1; YPM 09115–09116, Gregory J. Watkins-Colwell, 8/3/2003, n=1 each; YPM 09317–09318, Gregory J. Watkins-Colwell, 8/7/2003, n=1 each; YPM 09319, Gregory J. Watkins-Colwell, 8/10/2003, n=1; YPM 09323, Gregory J. Watkins-Colwell, 8/29/2003, n=1;

USA: Connecticut: Tolland County: Andover (lat 41.4502°N, long 72.2409°W): YPM 08920, Gregory J. Watkins-Colwell and Anton A. Leenders, 6/29/2003, n=1;

USA: Connecticut: Tolland County: Mansfield: YPM 07160, Heather A. Fried, 7/28/2002, n=1

#### RHACOPHORIDAE

*Chiromantis rufescens* (Günther 1869)

Gosner 25–27: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08107, Anton A. Leenders, 4/1/2003, n=11; YPM 08118, Anton A. Leenders, 4/1/2003, n=12; YPM 08124, Anton A. Leenders, 4/1/2003, n=10; YPM 08125, Anton A. Leenders, 4/1/2003, n=5

Gosner 41: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08116, Anton A. Leenders, 3/31/2003, n=3

Gosner 42: Equatorial Guinea: Provincia Wele-Nzas: Parque Nacional Los Altos de Nsork (lat 1.23122°N, long 11.01483°E): YPM 08132, Anton A. Leenders, 3/30/2003, n=1

*Polypedates leucomystax* (Gravenhorst 1829)

Gosner 46: China: Hong Kong: Lantau Island: Shui Hau (lat 22.1300°N, long 113.5500°E): YPM 05512, James D. Lazell, 7/9/1997, n=1

#### CAUDATA

##### PROTEIDAE

*Necturus punctatus* (Gibbes 1850)

Juvenile: USA: Florida: YPM 08925, Marshall B. Bishop, 1943, n=1

##### AMBYSTOMATIDAE

*Ambystoma jeffersonianum* (Green 1827)

Gallien and Durocher 1–21: Locality unknown: YPM 07551, n=4; YPM 07552, n=3; YPM 07553, n=6; YPM 07554, n=7; YPM 07555, n=5; YPM 07556, n=3; YPM 07557, n=6; YPM 07558, n=7;

USA: Connecticut: Litchfield County: Canaan (lat 41.5921°N, long 73.2116°W): YPM 07832, Anton A. Leenders, 4/20/2003, n=1

Gallien and Durocher 39: USA: Ohio: Delaware County: Porter Township: Sundbury (lat 40.1756°N, long 82.4947°W): YPM 07830, Sally Waterhouse, 4/25/2003, n=1

Gallien and Durocher 43–45: USA: Ohio: Delaware County: Porter Township: Sundbury (lat 40.1756°N, long 82.4947°W): YPM 08008–08009, Sally Waterhouse, 5/5/2003, n=1 each

Gallien and Durocher 53–54: USA: Ohio:

Delaware County: Porter Township: Sundbury: Olive Green Quad (lat 40.1756°N, long 82.4947°W): YPM 08220, Sally Waterhouse, 5/20/2003, n=1; YPM 08904, Sally Waterhouse, 6/20/2003, n=1

Gallien and Durocher 55: USA: Ohio: Delaware County: Porter Township: Sundbury: Olive Green Quad (lat 40.1756°N, long 82.4947°W): YPM 08918, Sally Waterhouse, 6/27/2003, n=1

*Ambystoma maculatum* (Shaw 1802)

Unstaged larva (specimen cleared and stained, late stage): Locality unknown: YPM 05900, n=1

Gallien and Durocher 1–21: Locality unknown: YPM 08704, n=8; YPM 08705, n=33; YPM 08706, n=23; YPM 08707, n=12; YPM 08708, n=21; YPM 08709, n=42; YPM 08710, n=42; YPM 08712, n=61; YPM 08713, n=7; YPM 08823, n=9;

Canada: Quebec: Gaspé Peninsula: Forillon Peninsula: Grand Grève (lat 48.4600°N, long 64.1400°W): YPM 00110, Stanley C. Ball, 7/1/1936;

USA: Connecticut: Middlesex County: North Plain: YPM 07637, Stanley C. Ball, 8/1/1934, n=12;

USA: Connecticut: New Haven County: Hamden: YPM 09112–09113, Maxim Shpak, 3/18/2003; YPM 09156, Maxim Shpak, 3/18/2003;

USA: Connecticut: New Haven County: Woodbridge (lat 41.2109°N, long

73.0032°W): YPM 00104, Marshall B. Bishop, 4/26/1934; YPM 00147, Marshall B. Bishop, 4/25/1934; YPM 00147, Marshall B. Bishop, 4/25/1934

Gallien and Durocher 22–24: Locality unknown: YPM 08711, n=28; YPM 08714, n=15; YPM 08715, n=10

Gallien and Durocher 25–28: Locality unknown: YPM 08716, n=20; YPM 08718, n=20; YPM 08779, n=2; YPM 08826, n=4; Canada: Quebec: Gaspé: Peninsula: Forillon Peninsula: Grand Grève (lat 48.4600°N, long 64.1400°W): YPM 08664, Stanley C. Ball, 7/9/1936, n=8; YPM 08665, Stanley C. Ball, 7/2/1937, n=10; YPM 08667, Stanley C. Ball, 7/2/1936, n=7

Gallien and Durocher 29: Locality unknown: YPM 08825, n=3

Gallien and Durocher 30: Locality unknown: YPM 08717, n=54

Gallien and Durocher 31–33: Locality unknown: YPM 08719, n=16; YPM 08833, 5/10/1923, n=4; YPM 08848, 5/10/1923, n=1; YPM 08849, 5/10/1923, n=1

Gallien and Durocher 34–38: Locality unknown: YPM 08748, n=1; YPM 08769, n=1; YPM 08770, n=1; YPM 08810, n=1; YPM 08811, n=1; YPM 08850, 5/10/1923, n=1;

Canada: Quebec: Grande Grève: YPM 08663, Stanley C. Ball, 7/2/1937, n=7;

USA: Connecticut: New London County: Colchester: YPM 07188, Hank Gruner, 5/11/2002, n=1

Gallien and Durocher 39: Locality unknown: YPM 08766, n=1; YPM 08798, n=1; YPM 08842, 5/10/1923, n=1; YPM 08844, 5/10/1923, n=1; YPM 08851, 5/10/1923, n=1;

USA: Connecticut: New London County: Voluntown: YPM 07191, Edward Natoli and Kim Hargrave, 5/11/2002, n=2

Gallien and Durocher 40: Locality unknown: YPM 08773, n=1; YPM 08807, n=1; YPM 08809, n=1; YPM 08814, n=1; YPM 08834, 5/10/1923, n=11; YPM 08843, 5/10/1923, n=1

Gallien and Durocher 41–42: Locality unknown: YPM 08764, n=1; YPM 08767, n=1; YPM 08768, n=1; YPM 08771, n=1; YPM 08772, n=1; YPM 08775, n=1; YPM 08777, n=1; YPM 08778, n=1; YPM 08796, n=1; YPM 08805, n=1; YPM 08815, n=1; YPM 08830, n=2; YPM 08832, 5/10/1923, n=1; YPM 08835, 5/10/1923, n=1; YPM 08838, 5/10/1923, n=1; YPM 08840, 5/10/1923, n=1; YPM 08841, 5/10/1923, n=1; YPM 08845, 5/10/1923, n=1; YPM 08846, 5/10/1923, n=1; YPM 08855, Alb. Dustay, 5/10/1923, n=10

Gallien and Durocher 43–45: Locality unknown: YPM 08776, n=1; YPM 08780, n=1; YPM 08813, n=3

Gallien and Durocher 46–48: Locality unknown: YPM 08762, n=1; YPM 08783, n=1; YPM 08792, n=1; YPM 08812, n=1; YPM 08829, n=1; YPM 08839, 5/10/1923, n=1;

Canada: Quebec: Gaspé: Peninsula: Forillon Peninsula: Grand Grève (lat 48.4600°N,

long 64.1400°W): YPM 08662, Stanley C. Ball, 7/14/1936; ST), n=8; YPM 08666, Stanley C. Ball, 1937, n=1;

USA: Connecticut: New London County: Lyme: YPM 07193, Hank Gruner and Edward Natoli, 5/11/2002, n=1;

USA: Connecticut: New London County: Norwich: Mohegan Park (lat 41.54892°N, long 72.07358°W): YPM 08902, Gregory J. Watkins-Colwell, 6/1/2002, n=1

Gallien and Durocher 49: Locality unknown: YPM 08789, n=1

Gallien and Durocher 50–51: Locality unknown: YPM 08774, n=1; YPM 08787, n=1; YPM 08827, n=1; YPM 08856, n=1;

USA: Connecticut: Middlesex County: North Plain: Rowan's Pond: YPM 07689, Stanley C. Ball, 3/25/1935, n=1

Gallien and Durocher 52: Locality unknown: YPM 08746, n=1; YPM 08750, n=1; YPM 08759, n=1; YPM 08760, n=1; YPM 08763, n=1; YPM 08781, n=1; YPM 08784, n=1; YPM 08785, n=1; YPM 08788, n=1; YPM 08790, n=1; YPM 08791, n=1; YPM 08794, n=1; YPM 08795, n=1; YPM 08797, n=1; YPM 08803, n=1;

USA: Connecticut: New London County: Lyme: YPM 07199, Edward Natoli, 8/3/2002, n=1;

USA: Connecticut: New London County: New London: YPM 08864, Gregory J. Watkins-Colwell and Anton A. Leenders and Hank Gruner and Richard Haley and

Daniel Jonathon Drew and Brian Roach  
and Bryan Goff and Casey Redington,  
6/6/2003, n=1

Gallien and Durocher 53–54: Locality un-  
known: YPM 08747, n=1; YPM 08749,  
n=1; YPM 08751–08758, n=1 each; YPM  
08761, n=1; YPM 08765, n=1; YPM 08786,  
n=1; YPM 08793, n=1; YPM 08799–08802,  
n=1 each; YPM 08804, n=1; YPM  
08806, n=1; YPM 08808, n=1; YPM  
08816–08822, n=1 each; YPM 08824, n=1;  
YPM 08828, n=1; YPM 08831, n=1; YPM  
08836, 5/10/1923, n=1; YPM 08837,  
5/10/1923, n=1; YPM 08847, 5/10/1923,  
n=1; YPM 08852, 5/10/1923, n=1; YPM  
08853, 5/10/1923, n=1;

Canada: Quebec: Grande Grève: Gaspé:  
“The Tub,” West Highlands: YPM 07651,  
Stanley C. Ball, 8/1/1938, n=1;

USA: Connecticut: Fairfield County: Fair-  
field: Connecticut: Audubon Center: YPM  
09019, Daniel Jonathon Drew and Sarah  
McGann, 7/18/2003, n=1; YPM 09020,  
Daniel Jonathon Drew and Sarah McGann,  
7/18/2003, n=1;

USA: Connecticut: Litchfield County: Mor-  
ris: (lat 41.71356°N, long 73.16518°W): YPM  
07054, Elisa Scholsohn, 7/14/2002, n=1;

USA: Connecticut: New Haven County:  
Woodbridge (lat 41.2109°N, long  
73.0032°W): YPM 08031, Marshall B.  
Bishop, 7/7/1930, n=1;

USA: Connecticut: New London County:  
Lyme: YPM 07198, Edward Natoli,  
8/3/2002, n=1;

USA: Connecticut: New London County:  
Norwich (lat 41.54892°N, long  
72.07358°W): YPM 06718, 6/1/2002, n=8;  
YPM 08903, Gregory J. Watkins-Colwell,  
6/1/2002, n=2;

USA: Connecticut: New London County:  
Voluntown: YPM 07202, Kim Hargrave,  
8/1/2002, n=1; YPM 07203, Kim Hargrave,  
8/1/2002, n=1

Gallien and Durocher 55: Locality un-  
known: YPM 08782, n=1; YPM 08854,  
5/10/1923, n=1; ;

USA: Connecticut: Litchfield County:  
Canaan (lat 41.5921°N, long 73.2116°W):  
YPM 09132, Gregory J. Watkins-Colwell  
and Anton A. Leenders, 7/31/2003, n=1;

USA: Connecticut: Windham County:  
Killingly: YPM 06698, Richard Haley,  
5/19/2002, n=7

Gallien and Durocher 56: USA: Connecti-  
cut: Fairfield County: Stratford (lat  
41.1536°N, long 73.0714°W): YPM 09026,  
Gregory J. Watkins-Colwell, 7/23/2003,  
n=1; YPM 09320, Gregory J. Watkins-Col-  
well, 8/7/2003, n=1; YPM 09322, Gregory J.  
Watkins-Colwell, 8/7/2003, n=1; YPM  
09326–09328, Gregory J. Watkins-Colwell,  
9/3/2003, n=1 each; YPM 09329–09330,  
Gregory J. Watkins-Colwell, 9/4/2003, n=1  
each;

USA: Connecticut: New Haven County:  
Guilford: Yale Peabody Field Station on  
Leetes Island Road (lat 41.26532°N, long  
072.73688°W): YPM 09147, Gregory J.  
Watkins-Colwell, 8/6/2003, n=1;

USA: Connecticut: New Haven County:  
Seymour: YPM 07073, James Knox,  
9/15/2002, n=1;

USA: Connecticut: Windham County:  
Killingly: YPM 07161, Richard Haley,  
9/29/2002, n=1

*Ambystoma opacum* (Gravenhorst 1807)

Gallien and Durocher 31–33: USA: Con-  
necticut: New London County: Lyme: YPM  
07215, Edward Natoli, 10/6/2002, n=1

Gallien and Durocher 46–48: USA: Con-  
necticut: Middlesex County: North Plain:  
Ruin Pond: YPM 08015, Stanley C. Ball,  
4/2/1933, n=1

Gallien and Durocher 50–51: USA: Con-  
necticut: Middlesex County: North Plain:  
Ruin Pond: YPM 08018, Stanley C. Ball,  
4/2/1933, n=1

Gallien and Durocher 52: USA: Connecti-  
cut: Fairfield County: Danbury: YPM  
08910, Victor O. DeMasi, 3/28/1999, n=2;

USA: Connecticut: Middlesex County:  
North Plain: Ruin Pond: YPM 08022, Stan-  
ley C. Ball, 4/2/1933, n=1; YPM 08023,  
Stanley C. Ball, 4/2/1933, n=1; YPM 08024,  
Stanley C. Ball, 4/2/1933, n=1

Gallien and Durocher 53–54: USA: Con-  
necticut: Middlesex County: North Plain:  
Ruin Pond: YPM 08010–08014, Stanley C.  
Ball, 4/2/1933, n=1 each; YPM  
08016–08017, Stanley C. Ball, 4/2/1933,  
n=1 each; YPM 08019–08021, Stanley C.  
Ball, 4/2/1933, n=1 each; YPM

08025–08029, Stanley C. Ball, 4/2/1933,  
n=1 each;

USA: Connecticut: New London County:  
Norwich: Mohegan Park: YPM 06709, Gre-  
gory J. Watkins-Colwell and James Sirch  
and Daniel Jonathon Drew and Brian  
Roach, 6/1/2002, n=1; YPM 06711, Gre-  
gory J. Watkins-Colwell and James Sirch  
and Daniel Jonathon Drew and Brian  
Roach, 6/1/2002, n=1; YPM 06708, Gre-  
gory J. Watkins-Colwell, 5/31/2002, n=1;  
YPM 06710, Gregory J. Watkins-Colwell  
and James Sirch and Daniel Jonathon Drew  
and Brian Roach, n=1

*Ambystoma tigrinum* (Green 1825)

Gallien and Durocher 25–28: USA: Ten-  
nessee: Wilson County: YPM 07625,  
“Charles D. Sullivan Company, Inc.,”  
3/9/2003, n=1; YPM 07646, “Charles D.  
Sullivan Company, Inc.,” n=3; YPM 07647,  
“Charles D. Sullivan Company, Inc.,” n=1

Gallien and Durocher 29: USA: Tennessee:  
Wilson County: YPM 07624, “Charles D.  
Sullivan Company, Inc.,” 3/9/2003, n=2;  
YPM 07627, “Charles D. Sullivan Com-  
pany, Inc.,” n=3

Gallien and Durocher 34–38: USA: Ten-  
nessee: Wilson County: YPM 07649,  
“Charles D. Sullivan Company, Inc.,”  
3/17/2003, n=8; YPM 07657, “Charles D.  
Sullivan Company, Inc.,” n=3; YPM 07661,  
“Charles D. Sullivan Company, Inc.,” n=8;  
YPM 08906 “Charles D. Sullivan Company,  
Inc.,” 4/7/2003, n=2

Gallien and Durocher 41–42: USA: Ten-

nessee: Wilson County: YPM 07664,  
“Charles D. Sullivan Company, Inc.,” n=1;  
YPM 08905, “Charles D. Sullivan Com-  
pany, Inc.,” 4/7/2003, n=1

Gallien and Durocher 43–45: USA: Ten-  
nessee: Wilson County: YPM 07670,  
“Charles D. Sullivan Company, Inc.,” n=4;  
YPM 07745, “Charles D. Sullivan Com-  
pany, Inc.,” n=1

Gallien and Durocher 53–54: USA: Col-  
orado: Gunnison County: YPM 08913, Eric  
E. Remington, 1964, n=1;

USA: Tennessee: Wilson County: YPM  
08221 “Charles D. Sullivan Company, Inc.,”  
5/20/2003, n=1

Gallien and Durocher 55: USA: Tennessee:  
Wilson County: YPM 08911 “Charles D.  
Sullivan Company, Inc.,” 11/14/1936, n=1

#### PLETHODONTIDAE

*Desmognathus niger* (Green 1818)

Eggs and egg masses: USA: Connecticut:  
New London County: New London: Bates  
Woods Park: YPM 08889, Gregory J.  
Watkins-Colwell, Brian Roach and Daniel  
J. Drew, 6/9/2003, n=9

Unstaged larvae: USA: Connecticut: Fair-  
field County: Weston: Devil’s Den (lat  
41.1414°N, long 73.2345°W): YPM 06679,  
Gregory J. Watkins-Colwell and Anton A.  
Leenders, 5/26/2002, n=1;

USA: Connecticut: Hartford County: Farm-  
ington (lat 41.4311°N, long 72.4957°W):  
YPM 08912, Addison E. Verrill, 1871, n=4;

USA: New Hampshire: Grafton County:  
Groton (lat 43.71738°N, long 71.84202°W):  
YPM 06135-06142, Gregory J. Watkins-  
Colwell, 8/19/2001, n=1 each

*Desmognathus quadramaculatus*  
(Holbrook 1840)

Unstaged larvae: USA: North Carolina:  
Stokes County: Camp Sertoma: YPM  
07037-07038, Brady Allen Porter,  
9/22/2001, n=1 each

*Eurycea bislineata* (Green 1818)

Eggs and egg masses: USA: Connecticut:  
Fairfield County: Trumbull: Old Mine  
Park: YPM 08646, 5/29/2003;

USA: Connecticut: Litchfield County: Mor-  
ris: YPM 08225, Anton A. Leenders,  
5/23/2003

Unstaged larvae: USA: Connecticut: Fair-  
field: Danbury: Tarrywile Park (lat  
41.2240°N, long 73.2717°W): YPM 05942,  
Noah Gordon and Patrick Owen, 6/9/2001,  
n=1; YPM 05956, Noah Gordon and  
Patrick Owen, 6/9/2001, n=1; YPM 05955,  
Noah Gordon and Patrick Owen, 6/9/2001,  
n=1; YPM 05957, Gregory J. Watkins-Col-  
well and Richard Haley and Hank Gruner,  
6/8/2001, n=1;

USA: Connecticut: Fairfield County: New  
Fairfield (lat 41.52049°N, long  
73.50378°W): YPM 07205, Gregory J.  
Watkins-Colwell and Anton A. Leenders,  
9/28/2002, n=1;

USA: Connecticut: Litchfield County: Corn-

wall: West Cornwall: YPM 09535-09536,  
Anton A. Leenders, 10/18/2003, n=1 each;

USA: Connecticut: Litchfield County: Morris: YPM 08218, Anton A. Leenders, 5/18/2003, n=1; YPM 08222, Anton A. Leenders, 5/20/2003, n=1; YPM 08635-08636, Anton A. Leenders, 5/27/2003, n=1 each; YPM 08645, Anton A. Leenders, 5/29/2003, n=2; YPM 08679, Anton A. Leenders, 6/3/2003, n=2; YPM 08900, Anton A. Leenders, 6/10/2003, n=2; YPM 08935, Anton A. Leenders, 7/10/2003, n=1; YPM 09402-09403, Anton A. Leenders, 9/21/2003, n=1 each;

USA: Connecticut: New London County: Colchester: YPM 09551, Steven Petras, 5/17/2003, n=1;

USA: Connecticut: New London County: New London: YPM 08862, Gregory J. Watkins-Colwell, Anton A. Leenders, Hank Gruner, Richard Haley, Daniel Jonathon Drew, Brian Roach and Bryan Goff and Casey Redington, 6/6/2003, n=2; YPM 08863, Gregory J. Watkins-Colwell and Anton A. Leenders and Hank Gruner and Richard Haley and Daniel Jonathon Drew and Brian Roach and Bryan Goff and Casey Redington, 6/6/2003, n=1; YPM 08899, Gregory J. Watkins-Colwell and Anton A. Leenders and Hank Gruner and Richard Haley and Daniel Jonathon Drew and Brian Roach and Bryan Goff and Casey Redington, 6/7/2003, n=1; YPM 08934, Gregory J. Watkins-Colwell, 7/10/2003, n=7;

USA: Connecticut: New London County: Norwich: YPM 06712, Brian Roach, 5/31/2002, n=1; YPM 06713, Brian Roach,

5/31/2002, n=1;

USA: Connecticut: New London County: Old Lyme: YPM 07219, Edward Natoli, 10/6/2002, n=1;

USA: Maine: Somerset County: Skowhegan: YPM 06387, William Reid, 8/20/1984, n=1

*Gyrinophilus porphyriticus* (Green 1827)

Unstaged larvae: USA: Maine: Somerset County: Caratunk: above Caratunk: Pleasant Pond Stream: YPM 06374, John Albright, 6/23/1984, n=1;

USA: Maine: York County: stream N of Folly Pond: YPM 06380, Peter D. Vickery, 7/10/1985, n=1;

USA: New York: Tompkins County: Carter Creek: YPM 09497, Anton A. Leenders and Casey Redington, 7/23/2003, n=1

#### SALAMANDRIDAE

*Cynops orientalis* (David 1873)

Unstaged larva: Locality unknown: YPM 07656, n=1; YPM 07659, n=1; YPM 07671, n=2; YPM 07672, n=3; YPM 07746, n=1

Gallien and Durocher 55: Locality unknown: YPM 08901 (captive), 4/7/2003, n=1

*Notophthalmus viridescens* (Rafinesque 1820)

Eggs or egg masses: USA: Connecticut: New Haven County: Stony Creek (lat 41.1552°N, long 72.4448°W): YPM 00056, Addison E. Verrill, 05/08/1872

Gallien and Durocher 52: USA: Connecticut: Fairfield County: Fairfield: Connecticut Audubon Center: YPM 09040, Daniel Jonathon Drew, 7/18/2003, n=2

Gallien and Durocher 53–54: USA: Connecticut: Litchfield County: Norfolk: YPM 07007, Joseph Markow and Jennifer Markow, 7/14/2002, n=3

Gallien and Durocher 56: USA: Connecticut: New London County: Lyme: YPM 07179, Hank Gruner and Edward Natoli, 5/11/2002, n=2

Young eft/recent metamorph: Canada: Quebec: Gaspé: Peninsula: Forillon Peninsula: Grand Grève (lat 48.4600°N, long 64.1400°W): YPM 08661, Stanley C. Ball, 9/1/1937, n=1;

USA: Connecticut: Fairfield County: Stratford (lat 41.1536°N, long 73.0714°W): YPM 09400, Gregory J. Watkins-Colwell, 9/21/2003, n=1;

USA: Connecticut: Litchfield County: Morris: (lat 41.71356°N, long 73.16518°W): YPM 08136, Anton A. Leenders, 5/11/2003;

USA: Connecticut: Litchfield County: Norfolk: YPM 08186, Joseph Markow, 3/29/2003, n=1; YPM 08189, Joseph Markow, 3/29/2003, n=1; YPM 08200, Joseph Markow, 3/29/2003, n=1;

USA: Connecticut: Middlesex County: North Plain (lat 41.2500°N, long 72.2000°W): YPM 07723, Stanley C. Ball, 7/14/1934, n=1;

USA: New York: Chautauqua County: Mayville: YPM 09154, Gregory J. Watkins-Colwell and Anton A. Leenders, 8/9/2003, n=1

*Triturus alpestris* (Laurenti 1768)

Gallien and Durocher 53–54: Greece: Central Greece: Euboea Region: Mount Parnassos: YPM 08675, George E. Watson III, 12/13/1959, n=2

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## Appendix 1.

Staging codes and corresponding descriptions used for larval Anura.

Gosner 1960	Distinctive visible characteristics
1-18	Egg and early embryo with neural fold closing
19-22	Pre-larva with tail and tail fin developing
23-24	Larva with external gills
25-27	Larva without external gills and no limb buds, or limb bud length less than half its diameter
28-30	Larva with limb bud length between 1 2 times its diameter
31-33	Larva with paddle-shaped extremities developing on limb buds
34-36	Larva with initial toe development
37-38	Larva with all five toes separated and formation of inner metatarsal tubercle
39	Subarticular tubercle development initiated
40	Subarticular tubercles present, cloacal tube present
41	Cloacal tube absent; forelimbs visible through ventral skin
42	Front limbs emerge; larval mouthparts disappear
43	Formation of mouth; angle of mouth between nostril and midpoint of eye; tail begins to regress
44	Angle of mouth between midpoint and posterior margin of eye; tail greatly reduced
45	Angle of mouth at posterior margin of eye; tail reduced to stub
46	Metamorphosis complete; tail completely resorbed

**Appendix 2.**

Staging codes and corresponding descriptions used for larval Caudata.

Harrison 1969	Gallien and Durocher 1957	Distinctive visible characteristics
1-21	1-21	Egg and early embryo with neural fold closing
22-25	22-24	Pre-larva with distinctive head developing
26-35	25-28	Larva with tail bud developing and curved body
36	29	Larva with gill buds and balancer buds prominent; body curved
37	30	Larva with straight body, three gill buds, front limb buds appear
38	31	Initiation of primary branching of gills
39	32	Initiation of primary branching of gills
	33a	Initiation of primary branching of gills
40	33b	Secondary and tertiary branching of gills
	34	Front limb bud conical
	35	Front limb bud becomes cylindrical
	36	Front limb bud cylindrical
(43?)	37	Formation of mouth; front limb paddle-shaped; resorption of vitellus
41	38	Front limb paddle-shaped and notched
42	39	2 well-developed digits on front limbs
43	40	Articulation of elbow
44	41	Third digit on front limb appears
45	42	3 digits well-developed on front limb
46	43	Fourth digit on front limb appears
	44	Lengthening of first two digits on front limb
	45	4 digits well-developed on front limb
	46	Hind limb elongated, cylindrical; balancers gone
	47	Hind limb paddle-shaped
	48	Hind limb paddle-shaped and notched
	49	2 digits well-developed on hind limbs
	50	Third digit on hind limb appears
	51	3 well-developed digits on hind limb
	52a	Fourth digit on hind limb appears
	52b	4 well-developed digits on hind limb
	53	Fifth digit on hind limbs appears
	54	5 well-developed digits on hind limbs
	55a	External gills at maximum development
	55b	External gills reduced to half their maximum size
	55c	First molt. Gills greatly reduced
	56	Metamorphosis completed

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