

Species Dossier

State of New York
Endangered Species Working Group
compiled:

Common Name: Black Racer
Scientific Name: *Coluber constrictor*
Family: Colubridae

Date

I. General Status

Current New York Status: Unlisted
Current Federal Status: Unlisted
Recommended New York Status:

Current status in surrounding states/provinces:

Connecticut:
Massachusetts:
New Jersey:
Ohio:
Ontario: out of range
Pennsylvania:
Quebec: out of range
Vermont:

Current Natural Heritage rank (TNC): G5 (N) S5
global state

Global and North American Ranges:

Southern Maine to northeast Alabama.

New York's position within global range:
central **peripheral** disjunct

- II. Historic New York Status and Distribution (>25 years ago)
Provide numbers and/or percent of state occupied and/or number of regions occupied (and basis for estimates), narratives, maps (if available and appropriate), and references/documentation:

Generally south of Lake Ontario and the Adirondacks. Albany, Westchester, Rockland, Suffolk, Washington, Rensselaer, Warren, Orange, Columbia, Monroe/Orleans, Nassau/Suffolk, Tioga and Ulster Counties.

- III. Current New York Status and Distribution
Provide numbers and/or percent of state occupied and/or number of regions occupied (and basis for estimates), narratives, maps (if available and appropriate), and references/documentation:

South of Lake Ontario and Mohawk River to the eastern part of New York state. North to Lake Champlain. Locally abundant

- IV. Author's Current Estimate of Population/Habitat Trends

Population Trend _____ Essential Habitat Trend

Declining	Declining
Stable	Stable
Increasing	Increasing
Unknown	Unknown

- V. Biological Description

1. Reproductive information:

Breeds in New York: yes
Confirmed in last 2 years: yes
Confirmed in last 10 years: yes

Confirmed in last 25 years yes
Confirmed prior to 25 years ago yes
Unconfirmed

OR

2. Does not breed in New York; is migrating or seasonal

OR

3. Species periodically expands or contracts into or out of New York

Age to sexual maturity Male 680-1595mm, 11 months; Female 710-1683mm, 2 years.

Number of breeding attempts per year 1 attempt

Average number of young per breeding attempt 7-31 eggs, typically 16-17.

Oviparous

Estimated number of reproductive years per female 15 years

Other narrative on species biology:

The active season for *Coluber constrictor* begins in late April to May with the emergence and dispersal of individuals from winter den sites to areas encompassing their home ranges. Males generally disperse further than females and there exists evidence that individuals use specific migratory routes to these areas. Home range size of Kansas racers averaged approximately 25 acres. There may be 2-3 adults per acre in areas of favorable habitat.

Breeding ensues immediately after emergence and continues from May through June. Males pursue sexually active females, intercepting them during the dispersal phase or in their home ranges. Two or more males may court one female. Courtship involves the male lying alongside the (receptive) female, vent to vent, and produces a series of spasmodic rippling abdominal movements. At different intervals, the male moves away from the female and moves rapidly around her. When the female is sufficiently stimulated, intromission is achieved lasting a few minutes. Females deposit eggs in late June to July in a variety of substrate (sawdust piles, soft soils, decaying vegetable matter, rotting wood, beneath rocks and logs or in fossorial mammal burrows). The eggs average 29-39mm x 14-21mm, incubate for 43 to 73 days and hatch from August through September. Hatchling black racers average 261mm snout-vent length. Growth is very rapid but declines with age. Yearling racers average 425-750mm SVL. Sex ratio for clutches of neonates is commonly 1:1 (male/female). Male survivorship tends to decline over time, presumably due to their greater wandering tendencies thus increasing their chances of being predated.

Racer activity is greatest on bright overcast or sunny days during the summer months and only on warm sunny days during spring and fall. Mammal burrows provide much needed shelter from days of intense heat. Vision plays a vital role in *Coluber constrictor's* ability to

locate prey items. These snakes feed on a variety of animals including small mammals, amphibians, eggs and birds, lizards and other snakes. Young racers feed mostly on insects and smaller vertebrates. Contrary to popular belief, black racers are not constrictors, but rather, they suffocate by pressing their prey to the ground with the weight of its body coils.

Movements back to the hibernacula begin in late September and extends to early November. These movements exhibit great yearly variation in timing and distances moved. In Michigan, all large adults and some yearlings were found back in a major den sites, whereas the hatchlings and most of the yearlings apparently hibernated in other dens, often with aggregation of *Thamnophis spp.*

The Black Racer has many natural enemies, Red-tailed Hawk, owls, mammals (skunk), and other snakes such as the king snake, timber rattler and copperhead.

VI. Habitat

(describe type, vulnerability, distribution and trend in amount overtime, also estimate future trends - - do you expect habitat to be lost in future? (amount, location, type?)

Black racers are encountered in a variety of habitats. Individuals may be found in grassland/woodland borders, swamp and marshlands, around old fields and farm buildings usually under some sort of cover (sawdust piles, stones boards, tinsheets, tarpaper or along stone walls riparian thickets. Individuals have been found in xeric oak-hickory forests, in abandoned orchards and riparian thickets.

Racers use a variety of sites for hibernacula such as rock crevices, mammal burrows (chipmunk, woodchuck) crayfish burrows in stream beds. Racers often share den sites with other snakes (copperheads, black rat snake, timber rattler and garter snakes).

VII. Discussion of Problems/Threats/Limiting/Overall Vulnerability (of both individuals and essential habitat):

1. Needless destruction of individuals by ignorant humans thinking they're venomous or dangerous.
2. Overcollecting.

3. Habitat destruction especially of den sites, often in association with rattlesnakes and/or copperheads.
4. No protection for racer habitat.
5. Pesticide/herbicide contamination.

VIII. Additional Study, Documentation, Research or Management Needed:

1. Age specific survivorship of newly hatched snakes as well as the mechanism used to locate den sites from the nest site.
2. Population densities and long term trends in New York State.
3. Population age and sex structure
4. Mark/recapture or radio telemetry studies to gain insight into the animal's movements and use of habitat.

IX. Prognosis for Recovery:

X. Documentation/References:
(also list or attach pertinent references, survey documents, studies, etc.)

1. Behler, J.L., F.W. King 1979. The Audubon Society Field Guide to North American Reptiles and Amphibians. Alfred A. Knopf, New York.
2. Brown, S.B., W.S. Parker 1976. Movement Ecology of *Coluber constrictor* Near Communal Hibernacula. Copeia, No. 2: 225-242.
3. Collins, J.T. 1974. Amphibians and Reptiles in Kansas. University of Kansas Publ., Museum of Natural History. Pages 169-171.

4. Collins, J.T. 1990. Standard Common and Current Scientific Names for North American Amphibians and Reptiles. Society for the Study of Amphibians and Reptiles, Herp. Circular No. 19.
5. Conant R.C., J.T. Collins 1991. Peterson Field Guide to Reptiles and Amphibians of Eastern/Central North America. Houghton Mifflin Co., Boston. Pages 183-185, Map No. 157.
6. DeGraaf R.M., D.D. Rudis 1981. Forest Habitat for Reptiles and Amphibians of the Northeast. U.S. Government Printing Office, Forest Service and U.S. Dept. of Agriculture Eastern, Region.
7. Ernst, C.H., R.W. Barbour 1989. Snakes of Eastern North America. George Mason University Press.
8. Fitch, H.S. 1963. Natural History of the Racer, *Coluber constrictor*. University of Kansas Publ., Mus. Nat. Hist. Vol.15(8): 351-468.
9. French, T., D. Pence 1991. Legal Categories of Rare Species in the Northeastern States. Northeast Nongame Technical Committee.
10. Green, N.B., T.K. Pauley 1979. Amphibians and Reptiles in West Virginia. University of Pittsburgh Press, West Virginia Department of Natural Resources Nongame Wildlife Program. pages 163-165.
11. Johnson, T.R. 1987. The Amphibians and Reptiles of Missouri. The Conservation Commission of the State of Missouri. Pages 232-234.
12. Pleuthner, R. 1981. Summation of Natural Heritage Ranks (for nal Study, Documentation, Research or Management Needed):
13. Rosen, P.C. 1991. Comparative Ecology and Life History of the Racer (*Coluber constrictor*) in Michigan. Copeia, No. 4: 897-909.
14. Tynning, T.F. 1990. Stokes Nature Guides - A Guide to Amphibians and Reptiles. Little, Brown and Company. Pages 343-351.
15. Wright, A.H., A.A. Wright 1970. Handbook of Snakes of the United States and Canada Vol. II. Comstock Publishing Associates, Cornell University Press. Pages 133-136.
16. Checklist of the Amphibians, Reptiles, Birds and Mammals of New York State, Including Their Protective Status 1987. N.Y.S. Dept. of Env. Con. Div. of Fish and Wildlife Nongame Unit.

XI. Experts Consulted/Reviewers of Dossier:

1. Randy Stechert, 90 Bank St., Midland Park, NJ 07432.

Prepared By:

Preparer's Status Recommendation:

Endangered
Threatened
Special Concern
Status Unknown
Status Secure
(no listing)