

TICK INFORMATION SHEET

The American Dog Tick

Dermacentor variabilis (Say, 1821)

The common name of this tick is given to it because it is the most widely distributed tick species in North America that commonly attacks the dog (Fig. 1).

DISTRIBUTION AND SEASONAL ACTIVITY

Dermacentor variabilis is widely distributed over the eastern two thirds of the United States and in parts of California, Idaho, Oregon, Washington, and Montana. It also is established in areas of Canada and Mexico. In central and northern states, adult tick activity begins around mid-April, peaks in June, and declines until September. In the southern states, all stages of the tick may be found on hosts throughout the year, although they usually are more abundant in the spring and summer.

HOSTS AND LOCATION ON HOST

Important hosts for the adult ticks include humans, dogs, cattle, horses, deer, and many other wild and domesticated mammals. The larvae and nymphs mainly engorge on mice and other small mammals. Adults attach on all areas of the body, whereas the larvae and nymphs primarily feed around the head, neck, and shoulders.

LIFE CYCLE SUMMARY

Dermacentor variabilis is a three-host tick.

- The female lays up to 6500 eggs.
- The preoviposition period is 3 to 58 days.
- The oviposition period is 14 to 32 days.
- The incubation period is 26 to 57 days.

- Larvae engorge in 3 to 13 days.
- Larvae molt in 6 to 247 days.
- Nymphs engorge in 3 to 11 days.
- Nymphs molt in 24 to 291 days.
- Females engorge in 5 to 27 days.
- Unfed larvae survive up to 540 days.
- Unfed nymphs survive up to 584 days.
- Unfed adults survive up to 1053 days.

In southern states, the life cycle possibly may be completed in 1 year, but in northern states, a 2-year cycle is more common.

TICK-BORNE DISEASES

In the southeastern and eastern United States, this tick is the primary vector of *Rickettsia rickettsii*, the causative agent of Rocky Mountain spotted fever in dogs and humans. *Dermacentor variabilis* also transmits other rickettsial agents such as *Rickettsia montana*, *Rickettsia rhipicephali*, and *Rickettsia bellii*. *Dermacentor variabilis* may transmit the agent that causes tularemia to humans and may cause tick paralysis. In dogs, this tick transmits the agent of babesiosis and causes tick paralysis. It also transmits *Cytauxzoon felis*, the causative agent of cytauxzoonosis in domestic and wild cats.

SELECTED REFERENCES

1. Bishopp FC, Smith CN: The American dog tick, eastern carrier of Rocky Mountain spotted fever. U.S. Department of Agriculture Circular no. 478:1-25, 1938
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3. Say T: An account of the arachnides of the United States. *Academy of Natural Sciences of Philadelphia Journal* 2:59-81, 1821
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5. Strickland RK, Gerrish RR, Hourrigan JL, et al: Ticks of Veterinary Importance, no. 485. Washington D.C., Animal and Plant Health Inspection Service, U.S. Department of Agriculture, 1976, pp 46-47