Rickettsia felis, West Indies

To the Editor: A spay–neuter (sterilization) program for feral cats from Basseterre, the capital of the Caribbean Island St. Kitts, found that most (45/58; 66%) cats had antibodies to spotted fever group rickettsiae (SFGR). The antibodies were detected with Rickettsia rickettsii antigen in a standard microimmunofluorescence assay (1). Titers for 13 (20%) cats were ≥320.

Most SFGR are transmitted by ticks, but because of their grooming habits, cats seldom have many ticks (2), and we did not find any ticks on the cats we saw through the program. We did, however, commonly find cat fleas, Ctenocephalides felis, which are the main vector of R. felis, a recently described member of the SFGR. R. felis seems to be apathogenic in cats (3) but is the agent of flea-borne spotted fever in humans (4). Although R. felis has been reported from North and South America, Europe, Africa, the Middle East, and Oceania (4), its presence in the Caribbean islands has not been established. To provide this information we tested DNA extracted with the QIAamp DNA Mini-Kit (QUIGEN, Valencia, CA, USA) from C. felis fleas preserved in 70% ethanol.

Of 57 (19%) C. felis fleas from St. Kitts, 11 were positive for R. felis DNA when tested by PCR using primers targeting SFGR ompA (5) or TaqMan assay using primers targeting gltA and a probe specific for the organism (6,7). For a negative control we used distilled water; for a positive control we used DNA from R. montanensis cultures or recombinant control plasmids constructed by amplifying target fragments from R. typhi strain Wilmington and R. felis strain LSU (7). The sequences of the ompA and gltA amplicons obtained had 100% nucleotide sequence similarity with homologous fragments of the type reference isolate R. felis URRxCal2. We used the Na-
Our study also expands the known distribution of *R. felis* and should alert healthcare workers who see residents or vacationers from the Caribbean islands of the possibility of flea-borne spotted fever in their patients.

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### References


### Rickettsia africae, Western Africa

To the Editor: *Rickettsia africae*, the causative agent of African tick-bite fever, is transmitted by *Amblyomma hebraeum* and *A. variegatum* ticks (1,2). These ticks are common in western, central, and southern Africa. Adults rarely feed on humans, although nymphs attach more frequently and larvae are sometimes serious pests (abundant and aggressive) (3).

African tick-bite fever is a neglected disease that has been mainly detected in tourists who were bitten by a tick while traveling in disease-endemic areas (2). A recent worldwide report showed rickettsial infection incidence to be 5.6% in a group of travelers in whom acute febrile infection developed after they returned from sub-Saharan Africa. African tick-bite fever is the second most frequently identified cause for systemic febrile illness among travelers, following malaria (4). Seroprevalence for spotted fever group rickettsiae is high in the Sahel regions of Africa (5), although there may be different emergent and classic rickettsioses in Africa.

*R. africae* has been detected by PCR in many African countries, including Niger, Mali, Burundi, and Sudan (6,7), and in most countries of equatorial and southern Africa (Figure). Most strains and cases have been found in South Africa (2). *R. africae* and African tick-bite fever have not previously been reported in Senegal, and few positive human serum samples have been documented in western Africa. *A. variegatum*, the main vector of *R. africae*, was introduced by cattle into Guadeloupe, West Indies, from Senegal in the early 1800s. Spotted fever caused by *R. africae* has become endemic there in the past 30 years (7). In addition to *R. africae*, *A. variegatum* ticks may transmit other human and animal pathogens, including Crimean-Congo hemorrhagic fever virus, Dodge virus, Thogoto virus,