










































Pathogen_species	Sampling_country	Tick_species	References
<i>Anaplasma bovis</i>	 Kenya	<i>Amblyomma gemma</i>	[65]
		<i>Amblyomma variegatum</i>	
		<i>Hyalomma rufipes</i>	
		<i>Hyalomma truncatum</i>	
		<i>Rhipicephalus appendiculatus</i>	
	 South Africa	<i>Rhipicephalus evertsi</i>	[139]
		<i>Rhipicephalus praetextatus</i>	[65]
		<i>Rhipicephalus pulchellus</i>	
		<i>Rhipicephalus decoloratus</i>	[53]
		<i>Rhipicephalus evertsi</i>	[71]
 Tunisia	<i>Hyalomma dromedarii</i>	[148]	
<i>Anaplasma centrale</i>	 Ethiopia	<i>Amblyomma lepidum</i>	[105]
		<i>Amblyomma variegatum</i>	
	 Ivory Coast	<i>Amblyomma variegatum</i>	[55]
	 South Africa	<i>Rhipicephalus gertrudae</i>	[53]
	 Uganda	<i>Rhipicephalus pulchellus</i>	[54]
<i>Anaplasma marginale</i>	 Algeria	<i>Rhipicephalus annulatus</i>	[89]
	 Benin	<i>Amblyomma variegatum</i>	[183]
	 Burkina Faso	<i>Rhipicephalus decoloratus</i>	[56]
	 Egypt	<i>Hyalomma excavatum</i>	[142]
			[74]




		[142]
	<i>Rhipicephalus annulatus</i>	[141]
		[74]
	<i>Rhipicephalus sanguineus</i>	[145]
	<i>Amblyomma cohaerens</i>	[116]
 Ethiopia	<i>Amblyomma lepidum</i>	[105]
	<i>Amblyomma variegatum</i>	
 Guinea	<i>Rhipicephalus geigy</i>	[121]
	<i>Rhipicephalus microplus</i>	
 Ivory Coast	<i>Rhipicephalus microplus</i>	[55]
 Kenya	<i>Rhipicephalus decoloratus</i>	[59]
 Madagascar	<i>Amblyomma variegatum</i>	[132]
	<i>Rhipicephalus microplus</i>	
	<i>Rhipicephalus decoloratus</i>	[53]
 South Africa		[115]
	<i>Rhipicephalus evertsi</i>	[53]
	<i>Rhipicephalus gertrudae</i>	
	<i>Amblyomma gemma</i>	
	<i>Rhipicephalus appendiculatus</i>	
 United Republic of Tanzania	<i>Rhipicephalus compositus</i>	[114]
	<i>Rhipicephalus decoloratus</i>	
	<i>Rhipicephalus praetextatus</i>	
	<i>Rhipicephalus pulchellus</i>	
Zambia	<i>Argas walkerae</i>	[147]
<i>Anaplasma ovis</i>	<i>Rhipicephalus bursa</i>	[110]


	 Algeria	<i>Rhipicephalus turanicus</i>	
	 Ethiopia	<i>Rhipicephalus decoloratus</i>	[105]
		<i>Rhipicephalus evertsi</i>	
		<i>Amblyomma gemma</i>	
		<i>Amblyomma variegatum</i>	[65]
		<i>Rhipicephalus appendiculatus</i>	
	 Kenya	<i>Rhipicephalus appendiculatus</i>	[139]
		<i>Rhipicephalus decoloratus</i>	
		<i>Rhipicephalus evertsi</i>	[59]
		<i>Rhipicephalus evertsi</i>	[139]
		<i>Rhipicephalus pulchellus</i>	[65]
	 Mozambique	<i>Rhipicephalus microplus</i>	[103]
	 South Africa	<i>Amblyomma hebraeum</i>	[71]
		<i>Rhipicephalus evertsi</i>	[53]
	 Tunisia	<i>Rhipicephalus sanguineus</i>	[111]
		<i>Rhipicephalus turanicus</i>	
	 Algeria	<i>Argas persicus</i>	[89]
	 Egypt	<i>Rhipicephalus sanguineus</i>	[145]
		<i>Amblyomma cohaerens</i>	[116]
<i>Anaplasma phagocytophilum</i>	 Ethiopia	<i>Amblyomma lepidum</i>	[105]
		<i>Amblyomma variegatum</i>	
	 Kenya	<i>Rhipicephalus maculatus</i>	[127]
		<i>Amblyomma hebraeum</i>	[124]
	 South Africa	<i>Haemaphysalis elliptica</i>	[125]




		<i>Rhipicephalus decoloratus</i>	[124]	
		<i>Rhipicephalus evertsi</i>		
		<i>Rhipicephalus sanguineus</i>	[125]	
		<i>Hyalomma detritum</i>	[104]	
	Tunisia	<i>Hyalomma marginatum</i>	[123]	
		<i>Ixodes ricinus</i>	[104]	
	Zambia	<i>Ornithodoros moubata</i>	[147]	
	Democratic Republic of the Congo	<i>Rhipicephalus sanguineus</i>	[133]	
		<i>Hyalomma excavatum</i>	[142]	
	Egypt	<i>Rhipicephalus annulatus</i>	[141]	
		<i>Rhipicephalus sanguineus</i>	[145]	
	Ethiopia	<i>Rhipicephalus decoloratus</i>	[76]	
	Guinea	<i>Rhipicephalus microplus</i>	[121]	
<i>Anaplasma platys</i>		<i>Rhipicephalus appendiculatus</i>	[59]	
		<i>Rhipicephalus camicasi</i>	[122]	
		Kenya	<i>Rhipicephalus decoloratus</i>	[59]
		<i>Rhipicephalus evertsi</i>		
		<i>Rhipicephalus pravus</i>	[65]	
		<i>Rhipicephalus pulchellus</i>		
	N/A		<i>Amblyomma variegatum</i>	[76]
			<i>Rhipicephalus sanguineus</i>	[122]
		South Africa	<i>Rhipicephalus evertsi</i>	[53]




	 Tunisia	<i>Hyalomma dromedarii</i>	[134]
		<i>Rhipicephalus sanguineus</i>	[104]
		<i>Amblyomma variegatum</i>	
	 Ivory Coast	<i>Hyalomma truncatum</i>	[55]
		<i>Rhipicephalus microplus</i>	
<i>Anaplasma spp.</i>	 Tunisia	<i>Hyalomma dromedarii</i>	[148]
		<i>Hyalomma excavatum</i>	
	 United Republic of Tanzania	<i>Amblyomma gemma</i>	[117]
<i>Anaplasma spp. (Omatjenne)</i>	 Ethiopia	<i>Amblyomma lepidum</i>	[105]
		<i>Amblyomma variegatum</i>	
<i>Candidatus Anaplasma ivorensis</i>	 Ivory Coast	<i>Amblyomma variegatum</i>	[55]
	 Egypt	<i>Rhipicephalus annulatus</i>	[141]
		<i>Amblyomma variegatum</i>	
<i>Candidatus Ehrlichia rustica</i>			
		<i>Hyalomma truncatum</i>	
	 Ivory Coast		[55]
		<i>Rhipicephalus microplus</i>	
		<i>Amblyomma variegatum</i>	
<i>Candidatus Ehrlichia urmitei</i>			
		<i>Hyalomma truncatum</i>	

			<i>Rhipicephalus microplus</i>	
<i>Candidatus Rickettsia barbariae</i>		Algeria	<i>Hyalomma excavatum</i>	[67]
			<i>Rhipicephalus bursa</i>	
		Swaziland	<i>Rhipicephalus simus</i>	[117]
<i>Candidatus Rickettsia kastelanii</i>		Morocco	<i>Haemaphysalis punctata</i>	[94]
			<i>Haemaphysalis sulcata</i>	
			<i>Haemaphysalis erinacei</i>	[143]
			<i>Hyalomma excavatum</i>	[67]
		Algeria	<i>Ixodes vespertilionis</i>	[73]
			<i>Rhipicephalus bursa</i>	[67]
			<i>Rhipicephalus sanguineus</i>	[110]
			<i>Rhipicephalus sanguineus</i>	[143]
			<i>Argas persicus</i>	
<i>Coxiella burnetii</i>		Egypt	<i>Hyalomma dromedarii</i>	[74]
			<i>Hyalomma excavatum</i>	
			<i>Rhipicephalus sanguineus</i>	[62]
			<i>Amblyomma cohaerens</i>	[178]
				[182]
		Ethiopia	<i>Amblyomma gemma</i>	[178]
			<i>Amblyomma variegatum</i>	[62]
			<i>Amblyomma variegatum</i>	[178]

		[182]
	<i>Hyalomma rufipes</i>	[178]
	<i>Rhipicephalus decoloratus</i>	[62]
	<i>Rhipicephalus decoloratus</i>	
	<i>Rhipicephalus praetextatus</i>	[178]
	<i>Rhipicephalus pulchellus</i>	
	<i>Amblyomma variegatum</i>	
	<i>Hyalomma rufipes</i>	
 Ghana	<i>Hyalomma truncatum</i>	[175]
	<i>Rhipicephalus sanguineus</i>	
	<i>Rhipicephalus spp.</i>	
 Ivory Coast	<i>Amblyomma variegatum</i>	[55]
	<i>Amblyomma gemma</i>	[177]
	<i>Amblyomma variegatum</i>	
	<i>Haemaphysalis leachi</i>	[176]
	<i>Rhipicephalus appendiculatus</i>	[177]
		[181]
 Kenya	<i>Rhipicephalus decoloratus</i>	[176]
		[177]
	<i>Rhipicephalus evertsi</i>	[181]
		[177]
	<i>Rhipicephalus pulchellus</i>	[181]
		[176]
	<i>Rhipicephalus sanguineus</i>	[176]
N/A	<i>Rhipicephalus pulchellus</i>	[76]

<i>Coxiella</i> spp.	 Nigeria	<i>Hyalomma dromedarii</i>	[168]
		<i>Hyalomma truncatum</i>	
	 Senegal	<i>Amblyomma variegatum</i>	[180]
		<i>Hyalomma rufipes</i>	
		<i>Hyalomma truncatum</i>	
		<i>Ornithodoros sonrai</i>	
		<i>Rhipicephalus annulatus</i>	
		<i>Rhipicephalus decoloratus</i>	
		<i>Rhipicephalus evertsi</i>	
		<i>Rhipicephalus guilhoni</i>	
 South Africa	<i>Amblyomma hebraeum</i>	[71]	
	<i>Haemaphysalis elliptica</i>	[125]	
	<i>Rhipicephalus evertsi</i>	[115]	
	<i>Rhipicephalus sanguineus</i>	[125]	
 Tunisia	<i>Hyalomma dromedarii</i>	[134]	
	<i>Hyalomma impeltatum</i>		
 Angola	<i>Amblyomma variegatum</i>	[146]	
	<i>Hyalomma truncatum</i>		
	<i>Rhipicephalus decoloratus</i>		
	<i>Rhipicephalus duttoni</i>		
	<i>Rhipicephalus evertsi mimeticus</i>		
 Egypt	<i>Rhipicephalus sanguineus</i>	[76]	
 Kenya	<i>Amblyomma cohaerens</i>	[179]	
	<i>Amblyomma gemma</i>		

		<i>Amblyomma lepidum</i>	
		<i>Amblyomma personatum</i>	
		<i>Amblyomma tholloni</i>	
		<i>Haemaphysalis spp.</i>	
		<i>Rhipicephalus appendiculatus</i>	
		<i>Rhipicephalus carnivoralis</i>	[76]
		<i>Rhipicephalus compositus</i>	
		<i>Rhipicephalus maculatus</i>	
		<i>Rhipicephalus pravus</i>	
		<i>Rhipicephalus spp.</i>	
		<i>Amblyomma gemma</i>	
		<i>Amblyomma variegatum</i>	
	N/A	<i>Hyalomma truncatum</i>	[76]
		<i>Rhipicephalus evertsi</i>	
		<i>Rhipicephalus praetextatus</i>	
		<i>Rhipicephalus pulchellus</i>	
	 Namibia	<i>Argas transgaripepinus</i>	[169]
	 Nigeria	<i>Hyalomma dromedarii</i>	[168]
		<i>Hyalomma truncatum</i>	
<i>Coxiella</i> -like endosymbionts	 Algeria	<i>Dermacentor marginatus</i>	
		<i>Haemaphysalis sulcata</i>	
		<i>Hyalomma detritum</i>	[26]
		<i>Hyalomma excavatum</i>	
		<i>Hyalomma lusitanicum</i>	
		<i>Hyalomma marginatum</i>	

	 Egypt	<i>Rhipicephalus sanguineus</i>	[76]
		<i>Amblyomma eburneum</i>	[127]
		<i>Amblyomma personatum</i>	
		<i>Amblyomma tholloni</i>	
		<i>Haemaphysalis spp.</i>	
	 Kenya	<i>Rhipicephalus appendiculatus</i>	
		<i>Rhipicephalus carnivoralis</i>	
		<i>Rhipicephalus compositus</i>	
		<i>Rhipicephalus maculatus</i>	[76]
		<i>Rhipicephalus praeus</i>	
		<i>Rhipicephalus spp.</i>	
		<i>Amblyomma gemma</i>	
		<i>Amblyomma variegatum</i>	
	N/A	<i>Hyalomma truncatum</i>	
		<i>Rhipicephalus evertsi</i>	
		<i>Rhipicephalus praetextatus</i>	
	 Sao Tome and Principe	<i>Amblyomma astrion</i>	[157]
		<i>Amblyomma variegatum</i>	
			[82]
	 Algeria		
<i>Ehrlichia canis</i>		<i>Rhipicephalus sanguineus</i>	[89]
	 Burkina Faso		[137]

 Cameroon

[130]


[129]

 Egypt

[145]

 Ghana

[137]

 Ivory Coast

[135]

Rhipicephalus evertsi

 Kenya

Rhipicephalus pravus

[65]

Rhipicephalus pulchellus








 Mali



Rhipicephalus muhsamae




[77]



 Niger

Hyalomma truncatum

		<i>Rhipicephalus evertsi</i>	[71]
	 South Africa		
		<i>Rhipicephalus sanguineus</i>	[125]
			[130]
<i>Ehrlichia chaffeensis</i>	 Cameroon	<i>Rhipicephalus sanguineus</i>	[129]
			[127]
	 Kenya	<i>Amblyomma spp.</i>	[127]
<i>Ehrlichia chaffeensis-like</i>	 Egypt	<i>Hyalomma excavatum</i>	[142]
<i>Ehrlichia ewingii</i>	 Cameroon	<i>Rhipicephalus sanguineus</i>	[130]
		<i>Hyalomma excavatum</i>	[142]
<i>Ehrlichia minasensis</i>	 Egypt	<i>Rhipicephalus annulatus</i>	
	 Swaziland	<i>Rhipicephalus muehlensi</i>	[117]
		<i>Rhipicephalus simus</i>	

	 Algeria	<i>Haemaphysalis sulcata</i>	[89]
<i>Ehrlichia muris</i>		<i>Rhipicephalus appendiculatus</i>	
		<i>Rhipicephalus evertsi</i>	[140]
		<i>Rhipicephalus sanguineus</i>	
<i>Ehrlichia ovina</i>	 South Africa	<i>Hyalomma rufipes</i>	
		<i>Rhipicephalus decoloratus</i>	
		<i>Rhipicephalus evertsi</i>	[53]
		<i>Rhipicephalus gertrudae</i>	
<i>Ehrlichia ruminantium</i>	 Algeria	<i>Hyalomma aegyptium</i>	[144]
	 Benin	<i>Amblyomma variegatum</i>	[183]

		[56]
	<i>Rhipicephalus microplus</i>	[50]
		[106]
	<i>Amblyomma variegatum</i>	
 Burkina Faso		[56]
	<i>Rhipicephalus microplus</i>	[50]
 Cameroon	<i>Amblyomma variegatum</i>	[51]
		[116]
	<i>Amblyomma cohaerens</i>	
		[138]
 Ethiopia		[76]
	<i>Amblyomma lepidum</i>	
		[105]

		[116]
	<i>Amblyomma variegatum</i>	
		[105]
	<i>Rhipicephalus decoloratus</i>	[105]
Gambia	<i>Amblyomma variegatum</i>	[113]
	<i>Amblyomma variegatum</i>	[55]
 Ivory Coast	<i>Rhipicephalus microplus</i>	[50]
	<i>Amblyomma falsomarmoreum</i>	
	<i>Amblyomma gemma</i>	
 Kenya	<i>Amblyomma nuttalli</i>	[65]
	<i>Amblyomma sparsum</i>	

	<i>Amblyomma variegatum</i>	
	<i>Hyalomma impeltatum</i>	[76]
	<i>Rhipicephalus evertsi</i>	[65]
N/A	<i>Amblyomma variegatum</i>	[76]
		[109]
		[53]
		[112]
 South Africa	<i>Amblyomma hebraeum</i>	[115]
		[63]
		[91]

[131]

Rhipicephalus decoloratus [115]

Amblyomma lepidum



[126]

Amblyomma variegatum



Amblyomma hebraeum [117]



Amblyomma gemma





Amblyomma lepidum [54]





Amblyomma variegatum [128]

Hyalomma truncatum [54]

			[120]
	 Zimbabwe	<i>Amblyomma hebraeum</i>	
			[131]
	Angola	<i>Rhipicephalus decoloratus</i>	[146]
			[130]
	 Cameroon	<i>Rhipicephalus sanguineus</i>	
			[129]
		<i>Rhipicephalus annulatus</i>	
<i>Ehrlichia spp.</i>			
	 Guinea	<i>Rhipicephalus geigy</i>	[121]
		<i>Rhipicephalus microplus</i>	
		<i>Amblyomma variegatum</i>	
	 Ivory Coast		[55]
		<i>Hyalomma truncatum</i>	

		<i>Rhipicephalus microplus</i>	
	 South Africa	<i>Amblyomma and Rhipicephalus spp.</i>	[107]
		<i>Amblyomma gemma</i>	
	 United Republic of Tanzania	<i>Amblyomma lepidum</i>	[117]
		<i>Amblyomma variegatum</i>	
		<i>Hyalomma rufipes</i>	
<i>Ehrlichia spp. (EU191229.1)</i>	 South Africa	<i>Rhipicephalus decoloratus</i>	[53]
		<i>Rhipicephalus evertsi</i>	
		<i>Argas persicus</i>	[89]
<i>Ehrlichia/Anaplasma spp.</i>	 Algeria	<i>Haemaphysalis erinacei</i>	[143]
		<i>Hyalomma aegyptium</i>	[144]
		<i>Hyalomma detritum</i>	[89]

	<i>Ixodes ricinus</i>	
	<i>Rhipicephalus annulatus</i>	
	<i>Rhipicephalus bursa</i>	
		[143]
	<i>Rhipicephalus sanguineus</i>	[89]
 Egypt	<i>Rhipicephalus annulatus</i>	[141]
	<i>Amblyomma lepidum</i>	
		[76]
 Ethiopia	<i>Rhipicephalus decoloratus</i>	
		[105]
	<i>Rhipicephalus evertsi</i>	
	<i>Ixodes aulacodi</i>	[102]



Ghana

Hyalomma impeltatum



Kenya

[76]

Rhipicephalus pravus



Morocco

Ixodes ricinus

[104]



Mozambique

Rhipicephalus microplus

[103]

N/A

Amblyomma variegatum

[76]

[53]

Amblyomma hebraeum



South Africa

[91]

Haemaphysalis elliptica

Hyalomma rufipes

[53]

Rhipicephalus decoloratus

Rhipicephalus evertsi

Rhipicephalus microplus

Rhipicephalus sanguineus [91]

Rhipicephalus warburtoni [53]

Hyalomma detritum [104]

Hyalomma dromedarii [148]









Hyalomma excavatum










 Tunisia









Ixodes ricinus [104]







Rhipicephalus sanguineus

Haemaphysalis leachi [93]

	 Uganda	<i>Rhipicephalus praetextatus</i>	
		<i>Argas walkerae</i>	
	 Zambia	<i>Ornithodoros faini</i>	[147]
		<i>Ornithodoros moubata</i>	
<i>Neoehrlichia mikiurensis</i>	 Ethiopia	<i>Amblyomma cohaerens</i>	[138]
<i>Neoehrlichia spp.</i>	 South Africa	<i>Rhipicephalus sanguineus</i>	[91]
<i>Occidentia massiliensis</i>	 Senegal	<i>Ornithodoros sonrai</i>	[174]
<i>Panola Mountain Ehrlichia (PME)</i>	 Zambia	<i>Amblyomma variegatum</i>	[119]
		<i>Hyalomma aegyptium</i>	[144]
		<i>Hyalomma detritum</i>	[153]
		<i>Hyalomma detritum</i>	[154]
		<i>Hyalomma dromedarii</i>	[70]
	 Algeria	<i>Hyalomma excavatum</i>	[67]
<i>Rickettsia aeschlimanni</i>		<i>Hyalomma excavatum</i>	[73]
		<i>Hyalomma marginatum</i>	[67]
		<i>Hyalomma marginatum</i>	[154]
		<i>Hyalomma scupense</i>	[73]
	Angola	<i>Hyalomma truncatum</i>	[146]
		<i>Hyalomma rufipes</i>	
	 Burkina Faso	<i>Hyalomma truncatum</i>	[81]

 Chad	<i>Hyalomma rufipes</i>	[75]
 Djibouti	<i>Hyalomma dromedarii</i>	
 Egypt	<i>Hyalomma impeltatum</i>	[74]
	<i>Hyalomma rufipes</i>	
	<i>Hyalomma impeltatum</i>	
 Ethiopia	<i>Hyalomma rufipes</i>	[81]
	<i>Hyalomma truncatum</i>	
 Ivory Coast	<i>Hyalomma marginatum</i>	[55]
	<i>Hyalomma truncatum</i>	
	<i>Amblyomma variegatum</i>	[64]
	<i>Hyalomma impeltatum</i>	[76]
	<i>Hyalomma marginatum</i>	[64]
		[76]
 Kenya	<i>Hyalomma rufipes</i>	[65]
		[64]
	<i>Hyalomma truncatum</i>	[65]
		[64]
	<i>Rhipicephalus pulchellus</i>	[65]
 Mali	<i>Hyalomma rufipes</i>	[77]
 Morocco	<i>Hyalomma marginatum</i>	[151]
		[94]
 Niger	<i>Hyalomma rufipes</i>	[77]
	<i>Hyalomma impeltatum</i>	[72]

<i>Rickettsia africae</i>	 Nigeria	<i>Hyalomma rufipes</i>	
		<i>Hyalomma impeltatum</i>	[78]
			[163]
		<i>Hyalomma rufipes</i>	[78]
	 Senegal	<i>Hyalomma truncatum</i>	[163]
		<i>Rhipicephalus evertsi</i>	
		<i>Rhipicephalus evertsi</i>	[78]
	 South Africa	<i>Hyalomma rufipes</i>	
		<i>Rhipicephalus appendiculatus</i>	[71]
		<i>Rhipicephalus evertsi</i>	
 Sudan	<i>Hyalomma rufipes</i>	[80]	
	<i>Hyalomma dromedarii</i>	[69]	
 Tunisia	<i>Hyalomma dromedarii</i>	[79]	
	<i>Hyalomma impeltatum</i>		
	<i>Hyalomma aegyptium</i>	[144]	
 Algeria	<i>Hyalomma aegyptium</i>	[89]	
	<i>Hyalomma detritum</i>		
	<i>Hyalomma dromedarii</i>	[90]	
		[150]	
	Angola	<i>Amblyomma variegatum</i>	[146]
		<i>Rhipicephalus decoloratus</i>	[146]
 Burkina Faso	<i>Amblyomma variegatum</i>	[81]	
 Burundi	<i>Amblyomma variegatum</i>	[77]	

	<i>Amblyomma variegatum</i>	
 Central African Republic	<i>Rhipicephalus compositus</i>	[60]
	<i>Rhipicephalus muhsamae</i>	
	<i>Amblyomma variegatum</i>	
 Comoros	<i>Rhipicephalus appendiculatus</i>	[66]
	<i>Rhipicephalus microplus</i>	
 Democratic Republic of the Congo	<i>Amblyomma compressum</i>	[163]
	<i>Amblyomma lepidum</i>	[75]
 Djibouti		[96]
	<i>Amblyomma variegatum</i>	[75]
	<i>Amblyomma cohaerens</i>	[62]
		[138]
	<i>Amblyomma gemma</i>	[81]
	<i>Amblyomma lepidum</i>	[62]
 Ethiopia		[62]
	<i>Amblyomma variegatum</i>	[138]
	<i>Rhipicephalus decoloratus</i>	[105]
	<i>Rhipicephalus evertsi</i>	
	<i>Amblyomma variegatum</i>	
	<i>Haemaphysalis paraleachi</i>	
 Guinea	<i>Hyalomma rufipes</i>	[163]
	<i>Rhipicephalus annulatus</i>	
	<i>Rhipicephalus decoloratus</i>	
	<i>Amblyomma variegatum</i>	[55]

 Ivory Coast

Hyalomma impressum

Hyalomma marginatum

Hyalomma truncatum

Rhipicephalus microplus

[164]

Amblyomma eburneum

[127]

[59]

Amblyomma gemma

[64]

[65]

[139]

Amblyomma lepidum

[64]

[59]

[160]

 Kenya

Amblyomma variegatum

[92]

[65]

[139]

Hyalomma impeltatum

[76]

Hyalomma truncatum

[64]

[59]

Rhipicephalus appendiculatus

[160]

Rhipicephalus decoloratus

[59]

Rhipicephalus evertsi

[65]









Rhipicephalus pulchellus

 Liberia



Amblyomma compressum















[163]









Amblyomma variegatum




<i>Rhipicephalus geigy</i>		
 Mali	<i>Amblyomma variegatum</i>	[77]
 Morocco	<i>Hyalomma aegyptium</i>	[167]
	<i>Amblyomma hebraeum</i>	[161]
 Mozambique	<i>Amblyomma variegatum</i>	[103]
N/A	<i>Amblyomma gemma</i>	[76]
	<i>Amblyomma variegatum</i>	
 Niger	<i>Amblyomma variegatum</i>	[77]
 Nigeria	<i>Amblyomma variegatum</i>	[159]
	<i>Amblyomma variegatum</i>	[78]
 Senegal	<i>Hyalomma rufipes</i>	
	<i>Rhipicephalus annulatus</i>	[163]
	<i>Rhipicephalus evertsi</i>	[61]
		[71]
	<i>Amblyomma hebraeum</i>	[63]
 South Africa		[91]
	<i>Haemaphysalis elliptica</i>	
	<i>Rhipicephalus appendiculatus</i>	[71]
	<i>Rhipicephalus evertsi</i>	
 Sudan	<i>Amblyomma lepidum</i>	[77]
	<i>Hyalomma dromedarii</i>	[80]









	 Swaziland	<i>Amblyomma hebraeum</i>	[117]
	 Tunisia	<i>Hyalomma dromedarii</i> <i>Hyalomma impeltatum</i>	[79]
	 Uganda	<i>Amblyomma variegatum</i>	[159]
<i>Rickettsia africanae</i>	 Sao Tome and Principe		[157]
<i>Rickettsia akari</i>	 South Africa	<i>Rhipicephalus sanguineus</i> <i>Rhipicephalus spp.</i>	[140]
	 Algeria	<i>Rhipicephalus sanguineus</i>	[82] [154]
	 Central African Republic	<i>Rhipicephalus muhsamae</i>	[60]
	 Kenya	<i>Rhipicephalus appendiculatus</i>	[64]
	 Morocco	<i>Rhipicephalus sanguineus</i>	[83]
<i>Rickettsia conorii</i>	 Nigeria		[84]
	 Senegal	<i>Rhipicephalus evertsi</i>	[163]
	 Swaziland	<i>Haemaphysalis elliptica</i>	[117]
	 Tunisia	<i>Rhipicephalus sanguineus</i>	[86] [87]
	 Uganda	<i>Haemaphysalis leachi</i> <i>Haemaphysalis punctaleachi</i>	[93] [96]
<i>Rickettsia conorii ssp. caspia</i>	 Zambia	<i>Rhipicephalus sanguineus</i>	[155]
<i>Rickettsia helvetica</i>	 Algeria	<i>Ixodes ricinus</i>	[90]
	 Morocco		[94]




	 Tunisia	<i>Hyalomma impeltatum</i>	[79]
		<i>Ixodes ricinus</i>	[95]
<i>Rickettsia hoogstraalii</i>	 Namibia	<i>Argas transgaripepinus</i>	[169]
	Zambia	<i>Argas walkerae</i>	[147]
<i>Rickettsia israelensis</i>	 Tunisia	<i>Rhipicephalus sanguineus</i>	[87]
<i>Rickettsia japonica</i>	 Sao Tome and Principe	<i>Amblyomma variegatum</i>	[157]
<i>Rickettsia lusitaniae</i>	Zambia	<i>Ornithodoros faini</i>	[147]
		<i>Ornithodoros porcinus</i>	[171]
		<i>Rhipicephalus bursa</i>	[73]
			[143]
	 Algeria		[82]
		<i>Rhipicephalus sanguineus</i>	[154]
			[85]
			[73]
	 Burkina Faso		[137]
<i>Rickettsia massiliae</i>		<i>Haemaphysalis leachi</i>	
		<i>Rhipicephalus lunulatus</i>	
	 Central African Republic	<i>Rhipicephalus muhsamae</i>	[60]
		<i>Rhipicephalus senegalensis</i>	
		<i>Rhipicephalus sulcatus</i>	
	 Guinea	<i>Haemaphysalis paraleachi</i>	[163]
		<i>Rhipicephalus senegalensis</i>	
	 Ivory Coast		[55]
	 Mali	<i>Rhipicephalus muhsamae</i>	[77]






	 Morocco	<i>Rhipicephalus sanguineus</i>	[83]
			[94]
	N/A	<i>Rhipicephalus praetextatus</i>	[76]
	 Nigeria	<i>Rhipicephalus turanicus</i>	[172]
	 Senegal	<i>Rhipicephalus guilhoni</i>	[163]
	 South Africa	<i>Amblyomma sylvaticum</i>	[61]
		<i>Rhipicephalus simus</i>	
	 Swaziland	<i>Haemaphysalis elliptica</i>	[117]
		<i>Rhipicephalus simus</i>	
	 Tunisia	<i>Rhipicephalus sanguineus</i>	[87]
	 Uganda	<i>Haemaphysalis leachi</i>	[93]
			[152]
	 Algeria		[89]
		<i>Ixodes ricinus</i>	[98]
<i>Rickettsia monacensis</i>			[90]
	 Morocco		[83]
			[94]
	 Tunisia	<i>Hyalomma impeltatum</i>	[79]
		<i>Ixodes ricinus</i>	[95]
	 Algeria	<i>Hyalomma aegyptium</i>	[167]
<i>Rickettsia mongolotimonae</i>	 Kenya	<i>Hyalomma unidentified</i>	[64]
	 Senegal	<i>Hyalomma truncatum</i>	[163]
<i>Rickettsia montanensis</i>	 Kenya	<i>Rhipicephalus appendiculatus</i>	[64]
<i>Rickettsia parkeri</i>		<i>Hyalomma truncatum</i>	




		<i>Rhipicephalus pulchellus</i>	
<i>Rickettsia raoultii</i>	 Liberia	<i>Ixodes muniensis</i>	[163]
	 Morocco	<i>Dermacentor marginatus</i>	[94]
	 Central African Republic	<i>Rhipicephalus compositus</i>	[60]
		<i>Rhipicephalus lunulatus</i>	
<i>Rickettsia rhipicephali</i>		<i>Amblyomma cohaerens</i>	[76]
	 Kenya	<i>Rhipicephalus evertsi</i>	[65]
		<i>Rhipicephalus pulchellus</i>	
			[90]
<i>Rickettsia slovaca</i>	 Algeria	<i>Dermacentor marginatus</i>	[73]
		<i>Haemaphysalis punctata</i>	
	 Morocco	<i>Dermacentor marginatus</i>	[94]
<i>Rickettsia sp. Ae-8</i>	 South Africa	<i>Amblyomma exornatum</i>	[173]
		<i>Carios capensis</i>	[13]
			[90]
		<i>Dermacentor marginatus</i>	[73]
			[143]
		<i>Haemaphysalis erinacei</i>	[85]
<i>Rickettsia spp.</i>	 Algeria	<i>Haemaphysalis punctata</i>	[73]
		<i>Haemaphysalis sulcata</i>	[89]
			[144]
		<i>Hyalomma aegyptium</i>	[167]
			[70]
		<i>Hyalomma dromedarii</i>	[90]




	<i>Hyalomma excavatum</i>	[73]
	<i>Hyalomma impeltatum</i>	[70]
	<i>Hyalomma rufipes</i>	
	<i>Hyalomma scupense</i>	[73]
	<i>Ixodes ricinus</i>	[90]
	<i>Ornithodoros erraticus</i>	[13]
	<i>Ornithodoros rupestris</i>	
	<i>Rhipicephalus bursa</i>	[73]
		[143]
	<i>Rhipicephalus sanguineus</i>	[89]
		[85]
		[73]
 Benin	<i>Amblyomma variegatum</i>	[108]
	<i>Hyalomma rufipes</i>	[170]
 Cameroon	<i>Hyalomma truncatum</i>	
	<i>Rhipicephalus lunulatus</i>	
	<i>Amblyomma tholloni</i>	[162]
	<i>Amblyomma variegatum</i>	
	<i>Haemaphysalis leachi</i>	
 Central African Republic	<i>Rhipicephalus compositus</i>	
	<i>Rhipicephalus lunulatus</i>	[60]
	<i>Rhipicephalus muhsamae</i>	
	<i>Rhipicephalus senegalensis</i>	
	<i>Rhipicephalus sulcatus</i>	

 Chad	<i>Hyalomma rufipes</i>	[75]
 Democratic Republic of the Congo	<i>Amblyomma compressum</i>	[163]
	<i>Amblyomma lepidum</i>	[75]
 Djibouti	<i>Amblyomma variegatum</i>	[96]
	<i>Hyalomma rufipes</i>	[75]
	<i>Hyalomma dromedarii</i>	
 Egypt	<i>Hyalomma impeltatum</i>	[149]
	<i>Hyalomma marginatum</i>	
	<i>Amblyomma cohaerens</i>	
	<i>Amblyomma lepidum</i>	[62]
	<i>Amblyomma variegatum</i>	
 Ethiopia	<i>Rhipicephalus decoloratus</i>	
	<i>Rhipicephalus evertsi</i>	[105]
 Gabon	<i>Amblyomma tholloni</i>	[162]
	<i>Amblyomma variegatum</i>	
	<i>Hyalomma rufipes</i>	
	<i>Hyalomma truncatum</i>	[175]
 Ghana	<i>Rhipicephalus evertsi</i>	
	<i>Rhipicephalus sanguineus</i>	
	<i>Rhipicephalus spp.</i>	
 Guinea	<i>Amblyomma variegatum</i>	[163]
	<i>Haemaphysalis paraleachi</i>	

	<i>Hyalomma rufipes</i>	
	<i>Rhipicephalus annulatus</i>	
	<i>Rhipicephalus decoloratus</i>	
	<i>Rhipicephalus senegalensis</i>	
	<i>Amblyomma variegatum</i>	
	<i>Hyalomma impressum</i>	
 Ivory Coast	<i>Hyalomma marginatum</i>	[55]
	<i>Hyalomma truncatum</i>	
	<i>Rhipicephalus microplus</i>	
	<i>Rhipicephalus senegalensis</i>	
	<i>Amblyomma cohaerens</i>	[76]
		[160]
	<i>Amblyomma variegatum</i>	
		[92]
	<i>Haemaphysalis leachi</i>	
	<i>Hyalomma impeltatum</i>	[76]
 Kenya	<i>Hyalomma rufipes</i>	
		[160]
	<i>Rhipicephalus appendiculatus</i>	
		[92]
	<i>Rhipicephalus decoloratus</i>	
	<i>Rhipicephalus maculatus</i>	[164]
	<i>Rhipicephalus spp.</i>	[92]
	<i>Amblyomma compressum</i>	
	<i>Amblyomma variegatum</i>	[163]
 Liberia	<i>Ixodes muniensis</i>	
	<i>Rhipicephalus geigy</i>	

 Madagascar	<i>Amblyomma variegatum</i>	[158]
	<i>Dermacentor marginatus</i>	
	<i>Haemaphysalis punctata</i>	[94]
	<i>Haemaphysalis sulcata</i>	
 Morocco	<i>Hyalomma aegyptium</i>	[167]
	<i>Hyalomma marginatum</i>	
	<i>Ixodes ricinus</i>	[94]
	<i>Rhipicephalus sanguineus</i>	
	<i>Amblyomma hebraeum</i>	[161]
 Mozambique	<i>Amblyomma variegatum</i>	[103]
	<i>Amblyomma gemma</i>	
N/A	<i>Amblyomma variegatum</i>	[76]
	<i>Rhipicephalus praetextatus</i>	
 Namibia	<i>Argas transgarepinus</i>	[169]
	<i>Amblyomma variegatum</i>	[159]
	<i>Hyalomma dromedarii</i>	[72]
		[168]
	<i>Hyalomma impeltatum</i>	[72]
 Nigeria		[168]
	<i>Hyalomma rufipes</i>	[72]
		[168]
	<i>Hyalomma truncatum</i>	
	<i>Rhipicephalus sanguineus</i>	[84]

 Sao Tome and Principe	<i>Amblyomma astrion</i>	[157]
	<i>Amblyomma variegatum</i>	[78]
	<i>Hyalomma impeltatum</i>	[163]
	<i>Hyalomma rufipes</i>	[78]
 Senegal	<i>Hyalomma truncatum</i>	
	<i>Rhipicephalus annulatus</i>	[163]
	<i>Rhipicephalus evertsi</i>	[78]
	<i>Rhipicephalus guilhoni</i>	[163]
		[115]
	<i>Amblyomma hebraeum</i>	[61] [91]
 South Africa	<i>Amblyomma sylvaticum</i>	[61]
	<i>Haemaphysalis elliptica</i>	[91]
	<i>Rhipicephalus decoloratus</i>	[115]
	<i>Rhipicephalus evertsi</i>	[91]
	<i>Rhipicephalus sanguineus</i>	[125] [61]
	<i>Rhipicephalus simus</i>	[71] [91]
 Sudan	<i>Amblyomma variegatum</i>	[166]

		[69]
	<i>Hyalomma dromedarii</i>	
		[79]
 Tunisia	<i>Hyalomma impeltatum</i>	
	<i>Ixodes ricinus</i>	[95]
	<i>Rhipicephalus sanguineus</i>	[86]
		[87]
	<i>Amblyomma variegatum</i>	[159]
		[165]
 Uganda	<i>Haemaphysalis leachi</i>	[93]
	<i>Haemaphysalis punctaleachi</i>	[96]
	<i>Rhipicephalus praetextatus</i>	[93]
	<i>Amblyomma gemma</i>	
	<i>Amblyomma lepidum</i>	[117]
	<i>Amblyomma marmoreum</i>	
	<i>Amblyomma variegatum</i>	
	<i>Ornithodoros moubata</i>	[156]
 United Republic of Tanzania	<i>Rhipicephalus appendiculatus</i>	
	<i>Rhipicephalus evertsi</i>	
	<i>Rhipicephalus muhsamae</i>	[117]
	<i>Rhipicephalus pravus</i>	
	<i>Rhipicephalus pulchellus</i>	
	<i>Rhipicephalus simus</i>	
Zambia	<i>Argas walkerae</i>	[147]
	<i>Ornithodoros faini</i>	
	<i>Amblyomma hebraeum</i>	[88]

		<i>Amblyomma rhinocerotis</i>	
		<i>Amblyomma sparsum</i>	
		<i>Amblyomma variegatum</i>	
	 Zimbabwe	<i>Haemaphysalis leachi</i>	
		<i>Hyalomma marginatum</i>	
		<i>Hyalomma truncatum</i>	
		<i>Rhipicephalus simus</i>	
<i>Rickettsia spp. (Davousti)</i>	 Gabon	<i>Amblyomma tholloni</i>	[162]
<i>Rickettsia spp. (Uilenbergi)</i>	 Central African Republic		
<i>Rickettsiella spp.</i>	 Namibia	<i>Argas transgaripepinus</i>	[169]
	 Algeria	<i>Ixodes ricinus</i>	[89]
<i>SFG Rickettsia spp.</i>	 Benin	<i>Amblyomma variegatum</i>	[108]
	 Tunisia	<i>Rhipicephalus sanguineus</i>	[86]