

Perspectives on Vector-Borne Diseases in Switzerland: A scoping review protocol

Appendix: Detailed search strategies used for this review

Research Team: Name	Affiliation	Background
Lilian Goepf	Institute of Social and Preventive Medicine (ISPM), University of Bern, Bern, Switzerland	PhD student / Research - Climate Change and Health
Ana Maria Vicedo-Cabrera	Institute of Social and Preventive Medicine (ISPM), and Oeschger Center for Climate Change Research, University of Bern, Bern, Switzerland,	Assistant Professor – Head of the Climate Change and Health group Research - Climate Change and Health
Ioannis Magouras	Veterinary Public Health Institute, Department of Clinical Research and Veterinary Public Health, University of Bern, Bern, Switzerland	Head of Zoonoses Research Group
Julien Riou	Center for Primary Care and Public Health (Unisanté), University of Lausanne	Associate Physician (DESS)
Beatrice Minder	Public Health & Primary Care Library, University Library of Bern, University of Bern, Bern, Switzerland	Information Specialist/Librarian

Full Search Strategy per Database

Research question 1:

What evidence exists regarding the introduction, establishment, and spread of invasive vector species and related vector-borne diseases in Switzerland?

Search strategies created in December 2023

Embase.com: Combination of concepts: ((1 OR 2) AND 3)) AND/NOT 4) applying Limits.

1) Disease Vectors Europe (VectorNet)
'dermacentor reticulatus'/de OR 'dermacentor reticulatus':ab,ti,kw OR 'Hyalomma marginatum'/de OR 'hyalomma marginatum':ab,ti,kw OR 'hyalomma lusitanicum'/de OR 'hyalomma lusitanicum':ab,ti,kw OR 'Ixodes persulcatus'/de OR ('ixodes persulcatus' OR 'taiga tick*'):ab,ti,kw OR 'Ixodes ricinus'/de OR ('ixodes ricinus' OR 'castor bean tick*'):ab,ti,kw OR 'Rhipicephalus bursa'/de OR 'rhipicephalus bursa':ab,ti,kw OR 'Rhipicephalus sanguineus'/de OR ('rhipicephalus sanguineus' OR 'brown dog tick*'):ab,ti,kw OR 'ornithodoros erraticus'/de OR 'ornithodoros erraticus':ab,ti,kw OR 'Aedes aegypti'/de OR (('aedes OR stegomyia) NEAR/3 (aegypti OR egypti OR argenteus OR calopus OR fasciata)) OR (('a.' OR 'ae.') NEXT/3 (aegypti OR egypti OR argenteus OR calopus)) OR 'yellow fever mosquito*' OR 'yellowfever mosquito*' OR (('yellow fever*' OR yellowfever*) AND mosquito*):ab,ti,kw OR 'Aedes albopictus'/de OR ('aedes albopictus' OR 'Stegomyia albopicta' OR 'Asian tiger mosquito*'):ab,ti,kw OR 'aedes japonicus'/de OR 'aedes japonicus':ab,ti,kw OR 'aedes atropalpus':ab,ti,kw OR 'aedes koreicus'/de OR 'aedes koreicus':ab,ti,kw OR 'aedes caspius'/de OR 'aedes caspius':ab,ti,kw OR 'aedes detritus'/de OR 'aedes detritus':ab,ti,kw OR 'aedes coluzzii':ab,ti,kw OR 'aedes vexans'/de OR 'aedes vexans':ab,ti,kw OR (('a.' OR 'ae.') NEXT/3 (albopictus OR japonicus OR atropalpus OR koreicus OR caspius OR detritus OR coluzzii OR vexans)):ab,ti,kw OR 'Anopheles atroparvus'/de OR 'anopheles atroparvus':ab,ti,kw OR 'anopheles claviger'/de OR 'anopheles claviger':ab,ti,kw OR 'Anopheles labranchiae'/de OR 'anopheles labranchiae':ab,ti,kw OR 'Anopheles maculipennis'/de OR 'anopheles maculipennis':ab,ti,kw OR 'Anopheles messeae'/de OR (anopheles NEAR/3 messeae):ab,ti,kw OR 'anopheles plumbeus'/de OR 'anopheles plumbeus':ab,ti,kw OR 'Anopheles sacharovi'/de OR (anopheles NEAR/3 sacharovi):ab,ti,kw OR 'anopheles superpictus'/de OR 'anopheles superpictus':ab,ti,kw OR 'coquillettidia richiardii'/de OR 'coquillettidia richiardii':ab,ti,kw OR 'culex antennatus'/de OR 'culex antennatus':ab,ti,kw OR 'culex modestus'/de OR 'culex modestus':ab,ti,kw OR 'culex perexiguus'/de OR 'culex perexiguus':ab,ti,kw OR 'Culex pipiens'/de OR (culex NEAR/3 (pipiens OR agilis OR autogenicus OR azoriensis OR bicolor OR bifurcatus OR calcitrans OR calloti OR comitatus OR consobrinus OR dipseticus OR disjunctus OR doliorum OR domesticus OR erectus OR fasciatus OR haematophagus OR longefurcatus OR luteus OR marginalis OR melanorhinus OR meridionalis OR osakaensis OR pallipes OR phytophagus OR quasimodestus OR rufinus OR rufus OR sternopunctatus OR thoracicus OR torridus OR trifurcatus OR unistriatus OR varioannulatus)):ab,ti,kw OR 'culex theileri'/de OR 'culex theileri':ab,ti,kw OR 'culex torrentium'/de OR 'culex torrentium':ab,ti,kw OR 'Culex tritaeniorhynchus'/de OR 'culex tritaeniorhynchus':ab,ti,kw OR 'culex tritaeniorhynchus':ab,ti,kw OR 'culex univittatus'/de OR 'culex univittatus':ab,ti,kw OR 'Culiseta annulata':ab,ti,kw OR 'phlebotomus alexandri':ab,ti,kw OR 'phlebotomus ariasi'/de OR 'phlebotomus ariasi':ab,ti,kw OR 'Phlebotomus langeroni'/de OR 'phlebotomus langeroni':ab,ti,kw OR 'phlebotomus orientalis':ab,ti,kw OR 'phlebotomus major'/de OR 'phlebotomus major':ab,ti,kw OR 'phlebotomus mascittii'/de OR 'phlebotomus mascittii':ab,ti,kw OR 'phlebotomus neglectus'/de OR 'phlebotomus neglectus':ab,ti,kw OR 'Phlebotomus papatasi'/de OR 'phlebotomus papatasi':ab,ti,kw OR 'phlebotomus papatasi':ab,ti,kw OR 'phlebotomus perilliewi'/de OR 'phlebotomus perilliewi':ab,ti,kw OR 'Phlebotomus perniciosus'/de OR 'phlebotomus perniciosus':ab,ti,kw OR 'Phlebotomus sergenti'/de OR 'phlebotomus sergenti':ab,ti,kw OR 'phlebotomus similis':ab,ti,kw OR 'phlebotomus tobii'/de OR 'phlebotomus tobii':ab,ti,kw OR 'culicoides chiopterus'/de OR

<p>'culicoides chiopterus':ab,ti,kw OR 'culicoides dewulfi'/de OR 'culicoides dewulfi':ab,ti,kw OR 'culicoides imicola'/de OR 'culicoides imicola':ab,ti,kw OR 'culicoides kingi'/de OR 'culicoides kingi':ab,ti,kw OR 'culicoides lupicaris':ab,ti,kw OR 'culicoides newsteadii'/de OR 'culicoides newsteadii':ab,ti,kw OR 'culicoides obsoletus':ab,ti,kw OR 'culicoides obsoletus':ab,ti,kw OR 'culicoides pulicaris'/de OR 'culicoides pulicaris':ab,ti,kw OR 'culicoides punctatus'/de OR 'culicoides punctatus':ab,ti,kw OR 'culicoides scoticus'/de OR 'culicoides scoticus':ab,ti,kw OR (disease* NEXT/3 vector*):ab,ti,kw</p>
<p>2) Vector-borne diseases (source : EFSA's vector-borne disease)</p> <p>'African swine fever'/de OR 'African swine fever*':ab,ti,kw OR 'Alkhurma hemorrhagic fever'/de OR 'alkhurma hemorrhagic':ab,ti,kw OR 'alkhurma haemorrhagic':ab,ti,kw OR 'Bhanja virus'/de OR ('bhanja virus*' AND (infect* OR disease*)):ab,ti,kw OR 'Crimean Congo hemorrhagic fever'/de OR 'crimean-congo hemorrhagic':ab,ti,kw OR 'crimean-congo haemorrhagic':ab,ti,kw OR 'congo hemorrhagic fever*':ab,ti,kw OR 'congo haemorrhagic fever*':ab,ti,kw OR 'heartwater disease'/de OR 'heartwater':ab,ti,kw OR 'cowdriosis':ab,ti,kw OR 'hepatozoonosis'/de OR 'hepatozoonosis*':ab,ti,kw OR (Hepatozoon AND (infect* OR disease*)):ab,ti,kw OR 'Nairobi sheep disease'/de OR 'nairobi sheep disease*':ab,ti,kw OR 'Thogoto virus'/de OR ('thogoto virus*' AND (infect* OR disease*)):ab,ti,kw OR 'piroplasmosis'/de OR 'babesio*':ab,ti,kw OR 'babesia*':ab,ti,kw OR 'piroplasm*':ab,ti,kw OR 'Borrelia infection'/exp OR 'borrelia*':ab,ti,kw OR (borrelia* AND (infect* OR disease*)):ab,ti,kw OR (Lyme* NEAR/3 disease*):ab,ti,kw OR 'human granulocytic anaplasmosis'/de OR (((human OR granulocytic) NEAR/3 (anaplasmos* OR ehrlichios*)) OR ((infect* OR disease*) NEAR/3 (anaplasma OR ehrlichia) NEAR/3 (phagocytophilum))):ab,ti,kw OR 'rickettsiosis'/exp OR 'rickettsios*':ab,ti,kw OR ((disease* OR infect*) NEAR/3 (Rickettsia*)):ab,ti,kw OR 'tick borne encephalitis'/exp OR (tick* AND (encephalit* OR meningoencephalit*)):ab,ti,kw OR 'tick borne relapsing fever'/de OR (tick* AND 'relapsing fever*'):ab,ti,kw OR 'chikungunya'/de OR 'chikungunya*':ab,ti,kw OR 'dengue'/exp OR 'dengue*':ab,ti,kw OR 'Japanese encephalitis'/de OR ((Japan* OR Japon*) NEAR/3 encephalit*):ab,ti,kw OR 'malaria'/exp OR 'malaria*':ab,ti,kw OR (plasmodi* NEAR/3 infect*):ab,ti,kw OR 'Rift Valley fever'/de OR ('Rift Valley' NEAR/3 fever*):ab,ti,kw OR 'Eastern equine encephalitis'/de OR ('east* equine' NEAR/3 (encephalit* OR encephalomyelit*)):ab,ti,kw OR (('getah virus*' OR getahvirus*) AND (infect* OR disease*)):ab,ti,kw OR ('highlands j virus*' AND (infect* OR disease*)):ab,ti,kw OR ('middelburg virus*' AND (infect* OR disease*)):ab,ti,kw OR ('Peruvian horse* sickness*'):ab,ti,kw OR 'St. Louis encephalitis'/de OR (Louis NEAR/3 (encephalit* OR meningoencephalit*)):ab,ti,kw OR 'Venezuelan equine encephalitis'/de OR 'Venezuela* equine':ab,ti,kw OR 'wesselsbron virus'/de OR ('wesselsbron virus*' AND (infect* OR disease*)):ab,ti,kw OR 'West Nile fever'/exp OR ('West Nile' NEAR/3 (fever* OR infect* OR disease*)):ab,ti,kw OR 'Western equine encephalitis'/de OR ('West* equine' NEAR/3 encephalit*):ab,ti,kw OR ('yunnan orbivirus*' AND (infect* OR disease*)):ab,ti,kw OR 'leishmaniasis'/de OR (Leishmanias* OR Leishmanios* OR (Leishmania* NEAR/3 infect*)):ab,ti,kw OR 'toscana virus infection'/de OR ('toscana virus*' AND (infect* OR disease*)):ab,ti,kw OR 'African horse sickness'/de OR ('African horsesickness' OR 'African horse sickness'):ab,ti,kw OR 'Aino virus'/de OR ('aino virus*' AND (infect* OR disease*)):ab,ti,kw OR 'Akabane virus'/de OR ('Akabane virus*' AND (infect* OR disease*)):ab,ti,kw OR 'bluetongue'/de OR ((bluetongue OR 'blue tongue') AND (disease* OR infect*)):ab,ti,kw OR 'bovine ephemeral fever'/de OR (((bovine OR ephemeral) NEAR/3 fever*) OR (Ephemerovirus* AND (infect* OR disease*)):ab,ti,kw OR 'cache valley virus'/de OR ('cache valley virus*' AND (fever* OR infect* OR disease*)):ab,ti,kw OR 'chuzan virus'/de OR (chuzan AND (disease* OR infect*)):ab,ti,kw OR 'epizootic hemorrhagic disease'/de OR 'epizootic haemorrhagic':ab,ti,kw OR 'epizootic hemorrhagic':ab,ti,kw OR 'equine encephalosis virus'/de OR 'equine encephalosis*':ab,ti,kw OR ('kotonkan virus*' AND (infect* OR disease*)):ab,ti,kw OR 'main drain virus*':ab,ti,kw OR 'schmallenberg virus infection'/de OR (schmallenberg AND (infect* OR disease*)):ab,ti,kw OR 'Shuni virus'/de OR ('shuni virus*' AND (infect* OR disease*)):ab,ti,kw OR 'vesicular stomatitis'/de OR 'vesicular stomatit*':ab,ti,kw OR (Vesiculovirus* AND (infect* OR disease*)):ab,ti,kw OR 'yellow fever'/de OR ('yellow fever*' OR yellowfever*):ab,ti,kw OR 'vector borne disease'/de OR ((vector* OR mosquito*) NEAR/3 (disease* OR infection*)):ab,ti,kw</p>
<p>3) Location (Switzerland and neighbouring countries)</p> <p>((('switzerland'/de OR 'switzerland':ab,ti,kw OR 'swiss':ab,ti,kw OR 'jura':ab,ti,kw OR 'alps':ab,ti,kw OR (france OR french OR german* OR italy OR italian* OR austria* OR liechtenstein*):ti,kw)) NOT (French-Polynesia*':ab,ti,kw OR 'French Guiana*':ab,ti,kw OR 'French West Indies':ab,ti,kw OR 'swiss model':ab,ti,kw))</p>
<p>4) Limits: Publication types, languages, years of publication, drug & therapy subheadings</p> <p>#5 AND ([article]/lim OR [article in press]/lim OR [conference paper]/lim OR [data papers]/lim OR [short survey]/lim) AND ([english]/lim OR [french]/lim OR [german]/lim OR [italian]/lim) AND [2003-2023]/py NOT 'drug dose'/lnk NOT 'drug development'/lnk NOT 'drug combination'/lnk NOT 'drug toxicity'/lnk NOT 'therapy'/lnk</p>

Web of Science Core Collection (via Clarivate): Combination of concepts: ((1 OR 2) AND 3)) AND/NOT 4) applying Limits.

*Science Citation Index Expanded (1900-present); Social Sciences Citation Index (1900-present); Arts & Humanities Citation Index (1975-present); Conference Proceedings Citation Index-Science (1990-present); Conference Proceedings Citation Index-Social Science & Humanities (1990-present); Emerging Sources Citation Index (2018-present)

<p>1) Disease Vectors Europe (VectorNet)</p> <p>TS=(dermacentor reticulatus OR hyalomma marginatum OR hyalomma lusitanicum OR ixodes persulcatus OR taiga tick* OR ixodes ricinus OR castor bean tick* OR rhipicephalus bursa OR rhipicephalus sanguineus OR brown dog tick* OR ornithodoros erraticus OR ((aedes OR stegomyia) NEAR/3 (aegypti OR egypti OR argenteus OR calopus OR fasciata)) OR ("ae." NEAR/3 (aegypti OR egypti OR argenteus OR calopus OR fasciata)) OR "yellow fever mosquito*" OR yellowfever mosquito* OR ("yellow fever*" OR yellowfever*) AND mosquito*) OR aedes albopictus* OR Stegomyia albopicta OR Asian tiger mosquito* OR aedes japonicus OR aedes atropalpus OR aedes koreicus OR aedes caspius OR aedes detritus OR aedes coluzzii OR aedes vexans OR ("ae." NEAR/3 (albopictus OR japonicus OR atropalpus OR koreicus OR caspius OR detritus OR coluzzii OR vexans)) OR anopheles atroparvus OR anopheles claviger OR anopheles labranchiae OR anopheles maculipennis OR (anopheles NEAR/3 messeae) OR anopheles plumbeus OR (anopheles NEAR/3 sacharovi) OR anopheles superpictus OR coquillettidia richiardii OR culex antennatus OR culex modestus OR culex perexiguus OR culex NEAR/3 (pipiens OR agilis OR autogenicus OR azoriensis OR bicolor OR bifurcatus OR calcitrans OR calloti OR comitatus OR consobrinus OR dipseticus OR disjunctus OR doliorum OR domesticus OR erectus OR fasciatus OR haematophagus OR longefurcatus OR luteus OR marginalis OR melanorhinus OR meridionalis OR osakaensis OR pallipes OR phytophagus OR quasimodestus OR rufinus OR rufus OR sternopunctatus OR thoracicus OR torridus OR trifurcatus OR unistriatus OR</p>
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varioannulatus)) OR culex theileri OR culex torrentium OR culex tritaeniorhynchus OR culex tritaeniorhynchus OR culex univittatus OR culiseta annulata OR phlebotomus alexandri OR phlebotomus ariasi OR phlebotomus langeroni OR phlebotomus orientalis OR phlebotomus major OR phlebotomus mascittii OR phlebotomus neglectus OR phlebotomus papatasi OR phlebotomus papatasi OR phlebotomus papatasi OR phlebotomus perilliewi OR phlebotomus perniciosus OR phlebotomus sergenti OR phlebotomus similis OR phlebotomus tobbi OR culicoides chiopterus OR culicoides dewulfi OR culicoides imicola OR culicoides kingi OR culicoides lupicaris OR culicoides newsteadi OR culicoides obsoletus OR culicoides pulicaris OR culicoides punctatus OR culicoides scotius OR "disease vector*" OR "mosquito vector*")

2) Vector-borne diseases (source : EFSA's vector-borne disease)

TS=(African swine fever* OR alkhurma hemorrhagic OR alkhurma haemorrhagic OR (bhanja virus* AND (infect* OR disease*)) OR crimean-congo hemorrhagic OR crimean-congo haemorrhagic OR congo hemorrhagic fever* OR congo haemorrhagic fever* OR heartwater OR cowdriosis* OR hepatooonosis* OR (Hepatozoon AND (infect* OR disease*)) OR nairobi sheep disease* OR (thogoto virus* AND (infect* OR disease*)) OR babesia* OR piroplasm* OR borrelia* OR (borrelia* AND (infect* OR disease*)) OR (Lyme* NEAR/3 disease*) OR (((human OR granulocytic) NEAR/3 (anaplasmosis* OR ehrlichiosis*)) OR ((infect* OR disease*) NEAR/3 (anaplasma OR ehrlichia) NEAR/3 (phagocytophilum))) OR rickettsiosis* OR ((disease* OR infect*) NEAR/3 (Rickettsia*)) OR (tick* AND (encephalit* OR meningoencephalit*)) OR (tick* AND relapsing fever*) OR chikungunya* OR dengue* OR ((Japan* OR Japon*) NEAR/3 encephalit*) OR malaria* OR (plasmodi* NEAR/3 infect*) OR (Rift Valley NEAR/3 fever*) OR (east* equine NEAR/3 (encephalit* OR encephalomyelit*)) OR ((getah virus* OR getahvirus*) AND (infect* OR disease*)) OR (highlands j virus* AND (infect* OR disease*)) OR (middelburg virus* AND (infect* OR disease*)) OR (Peruvian horse* sickness*) OR (Louis NEAR/3 (encephalit* OR meningoencephalit*)) OR Venezuela* equine OR (wesselsbron virus* AND (infect* OR disease*)) OR (West Nile NEAR/3 (fever* OR infect* OR disease*)) OR (West* equine NEAR/3 encephal*) OR (yunnan orbivirus* AND (infect* OR disease*)) OR Leishmaniasis* OR Leishmanios* OR (Leishmania* NEAR/3 infect*) OR (toscana virus* AND (infect* OR disease*)) OR African horsesickness OR African horse sickness OR (aino virus* AND (infect* OR disease*)) OR (Akabane virus* AND (infect* OR disease*)) OR ((bluetongue OR blue tongue) AND (disease* OR infect*)) OR ((bovine OR ephemeral) NEAR/3 fever*) OR (Ephemerovirus* AND (infect* OR disease*)) OR (cache valley virus* AND (fever* OR infect* OR disease*)) OR (chuzan AND (disease* OR infect*)) OR epizootic haemorrhagic OR epizootic hemorrhagic OR equine encephalosis* OR (kotonkan virus* AND (infect* OR disease*)) OR main drain virus* OR (schmallenberg AND (infect* OR disease*)) OR (shuni virus* AND (infect* OR disease*)) OR vesicular stomatitis* OR (Vesiculovirus* AND (infect* OR disease*)) OR "yellow fever*" OR yellowfever* OR ((vector* OR mosquito*) NEAR/2 (disease* OR infection*))

3) Location (Switzerland and neighbouring countries)

TS=(switzerland OR swiss OR jura OR alps OR aargau OR appenzel OR basel OR bern OR berne OR bernese OR berna OR fribourg OR freiburg OR friburgo OR geneva OR genf OR geneve OR ginevra OR glarus OR graubünden OR grisons OR grigioni OR grischun OR lucerne OR luzern OR lucerna OR neuchatel OR neuenburg OR nidwalden OR nidwald OR obwalden OR obwald OR "st. gallen" OR "sankt gallen" OR saint-gall OR "san gallo" OR schaffhausen OR sciaffusa OR schwyz OR svizzera OR solothurn OR soletta OR soleure OR thurgau OR turgovia OR ticino OR tessin OR unterwalden OR uri OR valais OR wallis OR vaud OR waadt OR vado OR zug OR zoug OR zurich OR zürich OR zurigo) OR TI=(germany OR german* OR italy OR italian* OR france OR french* OR austria* OR liechtenstein*) OR AK=(germany OR german* OR italy OR italian* OR france OR french* OR austria* OR liechtenstein*)

NOT TS=(French-Polynesia* OR "French Guiana*" OR "French West Indies" OR Swiss-model OR "Swiss ROI" OR "Swiss ADME")

4) Limits: article types

AND DT=(article OR early access OR proceedings paper OR news item OR data paper) AND PY=(2003-2023)

Google Scholar (first 200 results, sorted by relevance)

Date limit: 2003-2023

Records imported using **Harzing, A.W. (2007) Publish or Perish** (available from <https://harzing.com/resources/publish-or-perish>)

tick | mosquito | aedes | anopheles | culex | culicoides | phlebotomus | vector
disease | infection | borrelia | dengue | ehrlichiosis | encephalitis | lyme | malaria | rickettsia | "Nile" | yellow fever"
Switzerland | Swiss | Jura | alps | Germany | German | Italy | Italian | France | Austria | Liechtenstein

Research question 2:

What factors could potentially influence the spread and establishment of introduced vector-borne diseases within native vector species populations in Switzerland?

Search strategies created in March 2024

Embase.com: Combination of concepts: 1 AND 2 AND Limits 3

1) Names of the native potential vectors
'dermacentor reticulatus'/de OR 'dermacentor reticulatus':ab,ti,kw OR 'hyalomma marginatum'/de OR 'hyalomma marginatum':ab,ti,kw OR 'hyalomma lusitanicum'/de OR 'hyalomma lusitanicum':ab,ti,kw OR 'ixodes persulcatus'/de OR 'ixodes persulcatus':ab,ti,kw OR 'taiga tick*':ab,ti,kw OR 'ixodes ricinus'/de OR 'ixodes ricinus':ab,ti,kw OR 'castor bean tick*':ab,ti,kw OR 'rhipicephalus bursa'/de OR 'rhipicephalus bursa':ab,ti,kw OR 'rhipicephalus sanguineus'/de OR 'rhipicephalus sanguineus':ab,ti,kw OR 'brown dog tick*':ab,ti,kw OR 'ornithodoros erraticus'/de OR 'ornithodoros erraticus':ab,ti,kw OR 'culex pipiens'/de OR ((culex NEAR/3 (pipiens OR agilis OR autogenicus OR azoriensis OR bicolor OR bifurcatus OR calcitrans OR calloti OR comitatus OR consobrinus OR dipseticus OR disjunctus OR doliorum OR domesticus OR erectus OR fasciatus OR haematophagus OR longefurcatus OR luteus OR marginalis OR melanorhinus OR meridionalis OR osakaensis OR pallipes OR phytophagus OR quasimodestus OR rufinus OR rufus OR sternopunctatus OR thoracicus OR torridus OR trifurcatus OR unistriatus OR varioannulatus)):ab,ti,kw) OR 'culex modestus'/de OR 'culex modestus':ab,ti,kw OR 'coquillettidia richiardii'/de OR 'coquillettidia richiardii':ab,ti,kw OR 'anopheles superpictus'/de OR 'anopheles superpictus':ab,ti,kw OR 'anopheles plumbeus'/de OR 'anopheles plumbeus':ab,ti,kw OR 'anopheles maculipennis'/de OR 'anopheles maculipennis':ab,ti,kw OR 'aedes vexans'/de OR 'aedes vexans':ab,ti,kw OR 'aedes detritus'/de OR 'aedes detritus':ab,ti,kw OR 'aedes coluzzii':ab,ti,kw OR 'aedes caspius'/de OR 'aedes caspius':ab,ti,kw OR 'culicoides chiopterus'/de OR 'culicoides chiopterus':ab,ti,kw OR 'culicoides dewulfi'/de OR 'culicoides dewulfi':ab,ti,kw OR 'culicoides imicola'/de OR 'culicoides imicola':ab,ti,kw OR 'culicoides kingi'/de OR 'culicoides kingi':ab,ti,kw OR 'culicoides lupicaris':ab,ti,kw OR 'culicoides newsteadi'/de OR 'culicoides newsteadi':ab,ti,kw OR 'culicoides obsoletus'/de OR 'culicoides obsoletus':ab,ti,kw OR 'culicoides pulicaris'/de OR 'culicoides pulicaris':ab,ti,kw OR 'culicoides punctatus'/de OR 'culicoides punctatus':ab,ti,kw OR 'culicoides scoticus'/de OR 'culicoides scoticus':ab,ti,kw
2) Vector competence related concepts
'vector competence'/exp OR 'vectorial capacity'/exp OR (('salivary gland' OR 'saliva'/de) AND ('microflora'/exp OR 'bacteria'/exp OR 'virus'/exp OR 'virus transmission'/exp)) OR ((vector* NEAR/3 (competen* OR capacit*)):ab,ti,kw)
3) Limits: Years of publication
AND [2003-2024]/py

Web of Science Core Collection (via Clarivate): Combination of concepts: (1 AND 2 AND 3: Limits)

*Science Citation Index Expanded (1900-present); Social Sciences Citation Index (1900-present); Arts & Humanities Citation Index (1975-present); Conference Proceedings Citation Index-Science (1990-present); Conference Proceedings Citation Index-Social Science & Humanities (1990-present); Emerging Sources Citation Index (2019-present)

1) Names of the native potential vectors
TS=(dermacentor reticulatus OR hyalomma marginatum OR hyalomma lusitanicum OR ixodes persulcatus OR taiga tick* OR ixodes ricinus OR castor bean tick* OR rhipicephalus bursa OR rhipicephalus sanguineus OR brown dog tick* OR ornithodoros erraticus OR ((culex NEAR/3 (pipiens OR agilis OR autogenicus OR azoriensis OR bicolor OR bifurcatus OR calcitrans OR calloti OR comitatus OR consobrinus OR dipseticus OR disjunctus OR doliorum OR domesticus OR erectus OR fasciatus OR haematophagus OR longefurcatus OR luteus OR marginalis OR melanorhinus OR meridionalis OR osakaensis OR pallipes OR phytophagus OR quasimodestus OR rufinus OR rufus OR sternopunctatus OR thoracicus OR torridus OR trifurcatus OR unistriatus OR varioannulatus))) OR culex modestus OR coquillettidia richiardii OR anopheles superpictus OR anopheles plumbeus OR anopheles maculipennis OR aedes vexans OR aedes detritus OR aedes coluzzii OR aedes caspius OR culicoides chiopterus OR culicoides dewulfi OR culicoides imicola OR culicoides kingi OR culicoides lupicaris OR culicoides newsteadi OR culicoides obsoletus OR culicoides pulicaris OR culicoides punctatus OR culicoides scoticus)
2) Vector competence related concepts
TS=((('salivary-gland OR saliva) AND (microflora OR bacteria OR virus* OR virus-transmission*)) OR (vector* NEAR/3 (competen* OR capacit*)))
4) Limits: article types
AND DT=(article OR early access OR proceedings paper OR news item OR data paper) AND PY=(2003-2024)

Google Scholar (first 200 results, sorted by relevance)

Date limit: 2003-2024

Records imported using **Harzing, A.W. (2007) Publish or Perish** (available from <https://harzing.com/resources/publish-or-perish>)

tick|ticks|aedes|anopheles|culex|culicoides|phlebotomus vector competence|capacity -"Aedes aegypti"