Table S1. Relevant studies identified in the review, comparing the costs, time effort and performance of non-invasive genetic assessment (NGA).

Type of Study	Year	Country of Field or Laboratory Work	Target Animal	Non-Invasive DNA Source	Other Method	Costs	Time Effort	Efficacy of NGA	Reference
genotyping success	2013	Serbia	bird	feather	invasive genetic sampling	NA	lower	equivalent	[1]
genotyping success	2012	Ireland	bat	faeces	invasive genetic sampling	higher	higher	equivalent	[2]
genotyping success	2015	China	bird	feather	invasive genetic sampling	NA	NA	equivalent	[3]
genotyping success	2014	USA	carnivore	hair	invasive genetic sampling	NA	NA	equivalent	[4]
genotyping success	2015	New Zealand	marsupial	saliva	invasive genetic sampling	NA	NA	inferior	[5]
genotyping success	2009	Canada	bird	eggshell	invasive genetic sampling	NA	lower	equivalent	[6]
genotyping success	2020	USA	carnivore	hair	invasive genetic sampling	equivalent	NA	equivalent	[7]
genotyping success	2008	Brazil	cetacean	skin swab	invasive genetic sampling	NA	NA	equivalent	[8]
genotyping success	2003	Sri Lanka	elephant	faeces	invasive genetic sampling	NA	NA	equivalent	[9]
genotyping success	2017	Canada	reptile	cloacal swab	invasive genetic sampling	lower	lower	equivalent	[10]
genotyping success	2017	Colombia	bird	faeces	invasive genetic sampling	NA	lower	equivalent	[11]
genotyping success	2011	Germany	rodent	hair	invasive genetic sampling	NA	NA	equivalent	[12]
genotyping success	2012	Chile	amphibian	buccal swab	invasive genetic sampling	NA	NA	equivalent	[13]
genotyping success	2006	USA	bird	buccal swab	invasive genetic sampling	NA	lower	equivalent	[14]
genotyping success	2004	Sweden	carnivore	faeces	invasive genetic	NA	NA	equivalent	[15]

genotyping success	2017	USA	mollusc	skin swab	sampling invasive genetic sampling	NA	NA	equivalent	[16]
genotyping success	2019	UK	mollusc	eDNA (water)	invasive genetic sampling	NA	NA	equivalent	[17]
genotyping success	2012	China	bird	faeces	invasive genetic sampling	NA	NA	equivalent	[18]
genotyping success	2013	Norway	mollusc	skin swab	invasive genetic sampling	NA	NA	superior	[19]
genotyping success	2020	India	carnivore	hair	invasive genetic sampling	NA	NA	equivalent	[20]
genotyping success	2001	France	primate	faeces	invasive genetic sampling	NA	NA	equivalent	[21]
genotyping success	2017	Brazil	bird	eggshell	invasive genetic sampling	NA	NA	equivalent	[22]
genotyping success	2011	Spain	bird	eggshell	invasive genetic sampling	NA	NA	equivalent	[23]
genotyping success	2019	USA	reptile	faeces	invasive genetic sampling	NA	NA	equivalent	[24]
genotyping success	2014	Switzerland	carnivore	hair	invasive genetic sampling	NA	NA	equivalent	[25]
genotyping success	2007	UK	ungulate	hair	invasive genetic sampling	lower	NA	equivalent	[26]
genotyping success	2016	Peru	bird	feather	invasive genetic sampling	NA	NA	equivalent	[27]
genotyping success	2020	Czech Republic	arthropod	exuviae	invasive genetic sampling	NA	NA	equivalent	[28]
genotyping success	1997	USA	bird	feather	invasive genetic sampling	NA	NA	equivalent	[29]
genotyping success	2020	Argentina	carnivore	hair	invasive genetic sampling	NA	NA	equivalent	[30]
genotyping success	2010	USA	primate	faeces	invasive genetic sampling	NA	NA	equivalent	[31]
genotyping success	2013	Austria	amphibian	skin swab	invasive genetic sampling	NA	NA	equivalent	[32]
genotyping success	2019	Ireland	ungulate	faeces	invasive genetic sampling	NA	NA	equivalent	[33]
genotyping success	2011	France	mollusc	skin swab	invasive genetic	NA	NA	equivalent	[34]

					sampling				
genotyping success	2018	Austria	amphibian	skin swab	invasive genetic sampling	NA	NA	inferior	[35]
genotyping success	2009	Canada	carnivore	faeces	invasive genetic sampling	NA	NA	equivalent	[36]
genotyping success	2013	UK	arthropod	faeces	invasive genetic sampling	NA	NA	equivalent	[37]
genotyping success	2006	Canada	bird	eggshell	invasive genetic sampling	NA	NA	equivalent	[38]
genotyping success	2020	Canada	reptile	cloacal swab	invasive genetic sampling	NA	NA	equivalent	[39]
genotyping success	2011	Germany	reptile	buccal swab	invasive genetic sampling	NA	lower	equivalent	[40]
genotyping success	2020	Guyana	bird	feather	invasive genetic sampling	NA	NA	equivalent	[41]
genotyping success	2006	USA	carnivore	shed skin	invasive genetic sampling	NA	NA	equivalent	[42]
genotyping success	2017	UK	fish	skin swab	invasive genetic sampling	NA	NA	equivalent	[43]
genotyping success	2011	Japan	bird	eggshell	invasive genetic sampling	NA	NA	equivalent	[44]
species detection	2019	USA	carnivore	hair	camera traps	lower	lower	equivalent	[45]
species detection	2020	Australia	fish	eDNA (water)	field visual or acoustic survey	NA	NA	superior	[46]
species detection	2014	Canada	carnivore	hair	camera traps	NA	NA	inferior	[47]
species detection	2016	Canada	carnivore	hair	camera traps	NA	NA	equivalent	[48]
species detection	2012	Denmark	cetacean	eDNA (water)	field visual or acoustic survey	NA	NA	equivalent	[49]
species detection	2018	Laos	fish	eDNA (water)	lethal sampling	NA	NA	superior	[50]
species detection	2020	USA	arthropod	eDNA (water)	lethal sampling	lower	lower	superior	[51]
species detection	2006	USA	carnivore	faeces	multiple methods	NA	NA	equivalent	[52]
species detection	2019	UK	fish	eDNA (water)	lethal sampling	NA	NA	equivalent	[53]
species detection	2019	Canada	amphibian	eDNA (water)	field visual or acoustic survey	lower	lower	superior	[54]
species detection	2018	France	rodent	hair	live trapping	higher	higher	superior	[55]
species detection	2020	India	multiple species	faeces	multiple methods	NA	NA	equivalent	[56]
species detection	2013	USA	lagomorph	faeces	invasive genetic	lower	lower	superior	[57]

					sampling				
species detection	2017	Brazil	amphibian	eDNA (water)	field visual or acoustic survey	NA	lower	superior	[58]
species detection	2020	Greece	fish	eDNA (water)	lethal sampling	NA	NA	superior	[59]
species detection	2014	Portugal	carnivore	hair	camera traps	NA	NA	inferior	[60]
species detection	2016	USA	amphibian	eDNA (water)	live trapping	lower	NA	superior	[61]
species detection	2020	France	mollusc	eDNA (water)	field visual or acoustic survey	NA	lower	superior	[62]
species detection	2008	Spain	carnivore	faeces	camera traps	NA	lower	superior	[63]
species detection	2020	UK	multiple species	eDNA (water)	multiple methods	NA	lower	equivalent	[64]
species detection	2016	Australia	fish	eDNA (water)	lethal sampling	NA	NA	equivalent	[65]
species detection	2016	Australia	amphibian	eDNA (water)	live trapping	equivalent	lower	equivalent	[66]
species detection	2019	Australia	fish	eDNA (water)	field visual or acoustic survey	NA	NA	equivalent	[67]
species detection	2019	USA	fish	eDNA (water)	field visual or acoustic survey	NA	lower	superior	[68]
species detection	2019	China	cetacean	eDNA (water)	field visual or acoustic survey	NA	NA	superior	[69]
species detection	2015	Italy	carnivore	faeces	camera traps	NA	NA	equivalent	[70]
species detection	2014	Australia	marsupial	faeces	field visual or acoustic survey	lower	lower	superior	[71]
species detection	2020	Ireland	fish	eDNA (water)	lethal sampling	NA	lower	superior	[72]
species detection	2020	China	fish	eDNA (water)	lethal sampling	NA	NA	superior	[73]
population size estimation	2019	France	bird	faeces	field visual or acoustic survey	equivalent	lower	superior	[74]
population size estimation	2007	Sweden	carnivore	faeces	field visual or acoustic survey	higher	NA	superior	[75]
population size estimation	2016	Italy	carnivore	faeces	camera traps	higher	NA	superior	[76]
population size estimation	2018	Canada	carnivore	hair	camera traps	lower	lower	superior	[77]
population size estimation	2011	USA	carnivore	hair	lethal sampling	NA	NA	superior	[78]
population size estimation	2018	Portugal	rodent	faeces	invasive genetic sampling	lower	lower	superior	[79]
population size estimation	2016	Norway	carnivore	faeces	field visual or acoustic survey	NA	NA	superior	[80]

population size estimation	2009	Czech Republic	carnivore	faeces	field visual or acoustic survey	higher	higher	superior	[81]
population size estimation	2013	Laos	elephant	faeces	field visual or acoustic survey	lower	lower	superior	[82]
population size estimation	2017	USA	lagomorph	faeces	live trapping	lower	lower	equivalent	[83]
population size estimation	2011	Mongolia	carnivore	faeces	camera traps	lower	lower	superior	[84]
population size estimation	2013	Canada	carnivore	hair	radiotelemetry	lower	lower	superior	[85]
population size estimation	2018	Iran	carnivore	faeces	questionnaire survey	NA	NA	superior	[86]
population size estimation	2014	Panama	carnivore	faeces	camera traps	NA	NA	equivalent	[87]
population size estimation	2009	Australia	marsupial	faeces	live trapping	NA	higher	equivalent	[88]
population size estimation	2010	Australia	marsupial	hair	live trapping	NA	lower	inferior	[89]
population size estimation	2018	Portugal	rodent	faeces	live trapping	NA	lower	superior	[90]
population size estimation	2019	USA	fish	eDNA (water)	lethal sampling	NA	NA	equivalent	[91]
population size estimation	2006	Sweden	carnivore	faeces	field visual or acoustic survey	lower	NA	superior	[92]
population size estimation	2013	Brazil	carnivore	faeces	camera traps	NA	NA	equivalent	[93]
population size estimation	2011	USA	carnivore	faeces	radiotelemetry	NA	lower	equivalent	[94]
population size estimation	2019	USA	carnivore	hair	multiple methods	NA	NA	superior	[95]
population size estimation	2018	France	bat	faeces	field visual or acoustic survey	NA	NA	superior	[96]
diet analysis	2007	Australia	carnivore	faeces	microhistological analysis	NA	lower	superior	[97]
diet analysis	2007	Australia	bird	faeces	stomach flushing	NA	NA	inferior	[98]
diet analysis	2019	Spain	ungulate	faeces	microhistological analysis	lower	lower	equivalent	[99]
diet analysis	2017	USA	carnivore	faeces	microhistological	NA	NA	superior	[100]

					analysis				
diet analysis	2019	USA	ungulate	faeces	microhistological analysis	NA	lower	superior	[101]
diet analysis	2017	Germany	bird	faeces	microhistological analysis	NA	NA	superior	[102]
species identification	2017	Brazil	ungulate	faeces	faecal morphometry	NA	NA	superior	[103]
species identification	2008	India	carnivore	faeces	faecal morphometry	NA	NA	superior	[104]
species identification	2016	USA	carnivore	faeces	faecal morphometry	NA	NA	superior	[105]
species identification	2019	Brazil	carnivore	faeces	faecal morphometry	NA	NA	superior	[106]
species identification	2008	Gabon	ungulate	faeces	faecal morphometry	NA	NA	superior	[107]
health monitoring	2020	USA	bird	feather	invasive genetic sampling	NA	NA	equivalent	[108]
health monitoring	2015	USA	bird	faeces	microhistological analysis	NA	NA	superior	[109]
health monitoring	2015	USA	bird	faeces	invasive genetic sampling	NA	NA	inferior	[110]
health monitoring	2016	USA	cetacean	blowhole swab	invasive genetic sampling	NA	NA	equivalent	[111]
individual identification	2015	USA	lagomorph	faeces	radiotelemetry	lower	NA	superior	[112]
individual identification	2014	Portugal	fish	skin swab	colouration patterns recognition	higher	higher	equivalent	[113]

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