Supplementary document 1. Candidate models, which were compared using information-theoretical approaches.

Candidate model	Variables
All variables (global)	Capture occasion, amount of wooden debris in the creek, creek width, presence of predatory (cray) fish, amount of prey items, number of pools, substrate, creek inclination, creek inclination perpendicular, hiding places in the terrestrial habitat, deciduous, mixed and coniferous forest, settlements, grassland and arable land in a buffer (radius) 100 and 500 m
All terrestrial habitat variables	Capture occasion, hiding places, deciduous, mixed and coniferous forest, settlements, grassland and arable land in a buffer (radius) 100 and 500 m
All aquatic habitat variables	Capture occasion, amount of wooden debris, creek width, presence of predatory (cray)fish, amount of prey items, number of pools, substrate, creek inclination, creek inclination perpendicular
Individual selection	Capture occasion, creek width, number of pools according to Schmidt et al. (2015) who found these three parameters as good predictors

Supplementary document 2. Overview on amphibians, which have been swabbed in the whole study area from spring 2015 to autumn 2019. In the table, each for the study area north and south of the highway, sites names are arranged in alphabetical order and date. *Bsal*-positive sites and species are indicated in red. 95% Bayesian credible intervals (CI) refer to yearly prevalence at the site based on all samples of the respective year. If sex and age were noted: m = adult male, f = adult female, j = juvenile/subadult. GE = mean genomic equivalent in A and B samples.

Site	95%-Bayesian CI	Date	Species	N *Bsal*-infected	Ø GE A and B sample	Field workers
North of the highway						
Alfbach	**1/15=6.7% (2–29%)**	16 May 2018	*Ichthyosaura alpestris* (N=6, 4 m, 2 w)	0/6	0	N. Wagner/J. Viebahn/ K. Bredimus
			Lissotriton helveticus (N=9, 5 m, 4 w)	1(m)/9	5, 20	
Alfbach	**0/23=0% (0–14%)**	24 May 2019	*Ichthyosaura alpestris* (N=6, 4 m, 2 w)	0/6	0	S. Feldmeier
			Lissotriton helveticus (N=16, 9 m, 7 w)	0/16	0	S. Feldmeier
			Rana temporaira(1 j)	0/1	0	S. Feldmeier
Dreisbach	**2/44=4,6% (2–19%)**	17 May 2018	*Ichthyosaura alpestris* (N=14, 11 m, 3 w)	1(w)/14	19, 54	N. Wagner/J. Viebahn
			Lissotriton helveticus (N=22, 11 m, 11 w)	1(w)/23	2,10	
			Rana temporaria (N=7, 1 w, 6 j)	0/7	0	
Gerolstein	**0/1=0%(–)**	3 July 2018	*Rana temporaria* (N=1, 1 m)	0/1		K. Bredimus/J. Viebahn
Gerolstein	**1/13=8% (2–35%)**	7 June 2019	*Ichthyosaura alpestris* (N=10, 5 m, 5 w)	1(m)/10	1, 43	S. Feldmeier/J. Viebahn
			Lissotriton helveticus (N=1, 1 m)	0/1	0	
			Bufo bufo (N=1, 1 j)	0/1	0	
			Rana temporaria (N=1, 1 j)	0/1	0	
Jünkerath	**0/34=0% (0–11%)**	4, 6, 7 June 2018	*Ichthyosaura alpestris* (N=28)	0/28	0	D. Christiansen
			Lissotriton helveticus (N=6)	0/6	0	
Lindscheid	**0/1=0%(–)**	15 May 2017	*Ichthyosaura alpestris* (N=1, 1 m)	0/1	0	F. Keltsch
Neuendorf	**0/20=0% (0–16%)**	31 May 2017	*Ichthyosaura alpestris* (N=10, 6 m, 4 w)	0/10	0	F. Keltsch
Obermehlen	**0/5=0% (0–44%)**	24 May 2017	*Ichthyosaura alpestris* (N=3, 1 m, 2 w)	0/3	0	F. Keltsch
			Lissotriton helveticus (N=10, 7 m, 3 w)	0/10	0	
Prüm-Quelle	**0/26=0% (0–13%)**	30, 31 May 2017	*Ichthyosaura alpestris* (N=17, 9 m, 8 w)	0/17	0	F. Keltsch
			Lissotriton helveticus (N=2, 1 m, 1 w)	0/2	0	
Prüm-Quelle	**0/22=0% (0–14%)**	3 June 2018	*Ichthyosaura alpestris* (N=7, 4 m, 3 w)	0/7	0	K. Bredimus
			Lissotriton helveticus (N=23, 15 m, 8 w)	0/23	0	
			Rana temporaria (N=1, 1 j)	0/1	0	

Site	95%-Bayesian CI	Date	Species	N *Bsal*-infected	Ø GE A and B sample	Field workers
Schwarzer Mann	**0%(0–70%)**	24 May 2017	*Ichthyosaura alpestris* (N=2, 1 m, 1 w)	0/2	0	F. Keltsch
Schwarzer Mann	**1/15=6.7% (2–29%)**	11 April 2018	*Ichthyosaura alpestris* (N=5, 5 m)	1(m)/5	2, 2	N. Wagner/M. Wagner
			Lissotriton helveticus (N=10, 6 m, 4 w)	0/10	0	
Schwarzer Mann	**0/38=0% (0–9%)**	16 May 2019	*Ichthyosaura alpestris* (N=8, 1 m, 7 w)	0/8	0	N. Wagner/S. Feldmeier
			Lissotriton helveticus (N=29, 9 m, 20 w)	0/29	0	
			Rana temporaria (N=1, 1 j)	0/1	0	
Sellerich	**1/24=4.2% (7–20%)**	9 April 2018	*Ichthyosaura alpestris* (N=16, 13 m, 3 w)	1(m)/16	4, 5	N. Wagner/M. Wagner
			Lissotriton helveticus (N=8, 4 m, 4 w)	0/8	0	
Sellerich	**2/59=3% (1–12%)**	16, 23 May 2019	*Ichthyosaura alpestris* (N=16, 12 m, 12 w)	2(2 m)/24	5–128	N. Wagner/S. Feldmeier
			Lissotriton helveticus (N=34, 19 m, 15 w)	0/34	0	
			Rana temporaria (N=1, 1 j)	0/1	0	
Steinmehlen	**0/1=0%(–)**	24 May 2017	*Ichthyosaura alpestris* (N=1, 1 w)	0/1	0	F. Keltsch
Watzbach/-zufluss	**0/5=0% (0–44%)**	13 April 2016	*Salamandra salamandra* (N=2)	0/2	0	N. Wagner/J. Ewen/C. Kolwelter
			Ichthyosaura alpestris (N=3)	0/3	0	
Watzbach/-zufluss	**0/35=0% (0–10%)**	18 March/ 15 May 2017	*Salamandra salamandra* (N=33)	0/33	0	N. Wagner/F. Keltsch/S. Lötters/S. Feldmeier
			Ichthyosaura alpestris (N=2, 1 m, 1 w)	0/2	0	
Watzbach/-zufluss	**0/32=0% (0–11%)**	10 April 2018	*Salamandra salamandra* (N=27, 2 w, 25 j)	0/27	0	N. Wagner/M. Wagner
			Ichthyosaura alpestris (N=5, 4 m, 1 w)	0/5	0	
Watzbach/-zufluss	**11/65=17% (9–27%)**	2 May/ 7 September 2019	*Salamandra salamandra* (N=63, 33 undetermined, 7 m, 5 w, 18 j)	11/63 (4 undetermined, 4 m, 2 w, 1 j)	2–374,372	S. Feldmeier/J. Viebahn
			Ichthyosaura alpestris (N=1, 1 m)	0/1	0	
			Rana temporaria (N=1, 1 j)	0/1	0	
Winterscheid	**0/13=0% (0–22%)**	17 May 2017	*Ichthyosaura alpestris* (N=11, 8 m, 3 w)	0/11	0	F. Keltsch
			Lissotriton helveticus (N=2, 1 m, 1 w)	0/2	0	
Winterspelt	**0/1=0%(–)**	17 May 2017	*Lissotriton helveticus* (N=1, 1 m)	0/1	0	F. Keltsch
Wolfsschlucht	**0/30=0% (0–11%)**	11 Juli 2018	*Lissotriton helveticus* (N=30, 24 m, 6 w)	0/30	0	K. Bredimus/J. Viebahn

Site	95%-Bayesian CI	Date	Species	N *Bsal*-infected	Ø GE A and B sample	Field workers
South of the highway						
Arzfeld	**0/6=0% (0–43%)**	1 April 2016	*Salamandra salamandra* (N=3)	0/3	0	N. Wagner/U. Schulte
			Ichthyosaura alpestris (N=3)	0/3	0	
Arzfeld	**0/2=0% (0–70%)**	9 May 2017	*Lissotriton helveticus* (N=2 , 2 m)	0/2	0	F. Keltsch
Arzfeld	0/2=0% (0–70%)	5 April 2019	*Bufo bufo* (N=2, 1 m, 1 f)	0/2	0	N. Wagner/S. Feldmeier/J. Viebahn
Bitburg	**0/28=0% (0–12%)**	10 April 2017	*Ichthyosaura alpestris* (N=16, 10 m, 6 w)	0/16	0	F. Keltsch
			Lissotriton helveticus (N=12, 11 m, 1 w)	0/12	0	
Bitburg	**0/26=0% (0–12%)**	21, 23 June 2018	*Ichthyosaura alpestris* (N=15, 3 m, 12 w)	0/15	0	K. Bredimus/J. Viebahn
			Lissotriton helveticus (N=8, 8 w)	0/9	0	
			Rana temporaria (N=3, 1 m, 1 w, 1 j)	0/3	0	
Bitburg	**0/51=0% (0–7%)**	20 March 2019	*Ichthyosaura alpestris* (N=35, 22 m, 13 w)	0/35	0	N. Wagner/J. Viebahn
			Lissotriton helveticus (N=16, 8 m, 8 w)	0/16	0	
Bollendorf	**0/59=0% (0–6%)**	27, 29, 31 March 2017	*Ichthyosaura alpestris* (N=29, 23 m, 6 w)	0/29	0	N. Wagner, J. Beninde, F. Keltsch
			Lissotriton helveticus (N=30, 24 m, 6 w)	0/30	0	
Bollendorf	**0/6=0% (0–43%)**	28 March 2018	*Ichthyosaura alpestris* (N=3, 1 m, 2 w)	0/3	0	N. Wagner
			Lissotriton helveticus (N=3, 2 m, 1 w)	0/3	0	
Bollendorf	**0/51=0% (0–7%)**	19 March 2019	*Ichthyosaura alpestris* (N=30, 21 m, 9 w)	0/30	0	N. Wagner
			Lissotriton helveticus (N=21, 11 m, 10 w)	0/21	0	
Daleiden	**0/5=0% (0–44%)**	9 May 2017	*Ichthyosaura alpestris* (N=1 ,1 w)	0/1	0	F. Keltsch
			Lissotriton helveticus (N=4, 2 m, 2 w)	0/4	0	
Fleißbach	**0/4=0% (0–51%)**	9 March 2017	*Salamandra salamandra* (N=4)		0	N. Wagner/S. Feldmeier
Fleißbach	**0/8=0% (0–31%)**	13 March/ 4 April 2018	*Salamandra salamandra* (N=6, 6 w)	0/6	0	N. Wagner/K. Wallrich
			Rana temporaria (N=2, 2 j)	0/2	0	
Fuhrbach (?)	**0/4=0% (0–51%)**	3 May 2017	*Ichthyosaura alpestris* (N=2, 1 m, 1 w)	0/2 (1(m)/2?)	1, 0	F. Keltsch
			Lissotriton helveticus (N= 2, 1 m, 1 w)	0/2	0	
Fuhrbach	**0/42=0% (0–8%)**	7 May 2019	*Ichthyosaura alpestris* (N=3, 1 m, 2 w)	0/3	0	S. Feldmeier
			Lissotriton helveticus (N= 39, 25 m, 14 w)	0/39	0	

Site	95%-Bayesian CI	Date	Species	N *Bsal*-infected	Ø GE A and B sample	Field workers
Grasmärchen	**0/6=0% (0–43%)**	12 April 2016	*Salamandra salamandra* (N=6)	0/6	0	N. Wagner/J. Beninde/ S. Feldmeier
Grasmärchen	**0/3=0% (0–61%)**	21 March 2017	*Salamandra salamandra* (N=3)	0/3	0	N. Wagner/S. Lötters/M. Veith
Großkampenberg	**0/5=0% (0–44%)**	26 April 2015	*Ichthyosaura alpestris* (N=4)	0/4	0	N. Wagner/L. Marin da Fonte/S. Lötters
			Lissotriton helveticus (N=1)	0/1	0	
Großkampenberg	**0%(0–31%)**	11 May 2017	*Ichthyosaura alpestris* (N=4, 2 m, 2 w)	0/4	0	F. Keltsch
			Lissotriton helveticus (N=4, 3 m, 1 w)	0/4	0	
Gutenbach	**0/4=0% (0–51%)**	4 May 2015	*Salamandra salamandra* (N=4)	0/4	0	S. Lötters/L. Marin da Fonte
Gutenbach	**0/16=0% (0–20%)**	25 March 2016	*Salamandra salamandra* (N=16)	0/16	0	N. Wagner/S. Lötters/ J. Beninde/G. Fichera
Gutenbach	**0/6=0% (0–43%)**	19 March 2017	*Salamandra salamandra* (N=6)	0/6	0	N. Wagner/K. Wallrich
Gutenbach	**0/1=0%(–)**	2 May 2018	*Salamandra salamandra* (N=1)	0/1	0	N. Wagner/S. Lötters
Habscheid	**0/1=0%(–)**	15 May 2017	*Ichthyosaura alpestris* (N=1, 1 m)	0/1	0	F. Keltsch
Hauchenbach	**0/22=0% (0–15%)**	4 April 2016	*Salamandra salamandra* (N=22)	0/22	0	N. Wagner/J. Beninde/ S. Feldmeier
Hauchenbach	**0/2=0% (0–70%)**	15 March 2018	*Bufo bufo* (N=1, 1 w)	0/1	0	N. Wagner/B. Fontaine
		14 May 2018	*Rana temporaria* (N=1, 1 w)	0/1	0	
Hauchenbach	**0/15=0% (0–19%)**	6 March/ 8 April 2019	*Salamandra salamandra* (N=10, 10 w)	0/10	0	N. Wagner/S. Feldmeier/J. Viebahn
			Bufo bufo (N=1, 1 m)	0/1	0	
			Rana temporaria (N=3, 1 m)	0/3	0	
Heisdorf	**0/6=0% (0–43%)**	24 May 2017	*Ichthyosaura alpestris* (N=3, 1 m, 2 w)	0/3	0	F. Keltsch
			Lissotriton helveticus (N=3, 2 m, 1 w)	0/3	0	
Holsthum	**0/1=0%(–)**	27 March 2017	*Lissotriton helveticus* (N=1, 1 m)	0/1	0	F. Keltsch
Hütten	**0/4=0% (0–51%)**	8 May 2017	*Ichthyosaura alpestris* (N=2, 2 m)	0/2	0	F. Keltsch
			Lissotriton helveticus (N=2, 2 w)	0/2	0	
Idenheim	**0/16=0% (0–20%)**	1 April 2017	*Ichthyosaura alpestris* (N=12, 7 m, 5 w)	0/12	0	F. Keltsch
			Lissotriton helveticus (N=4, 2 m, 2 w)	0/4	0	
Idenheim	0/30=0% (0–11%)		*Ichthyosaura alpestris* (N=6, 1 m, 5 w)	0/6	0	N. Wagner
			Lissotriton helveticus (N=24, 19 m, 5 w)	0/24	0	
Ingendorf	**0/1=0%(–)**	18 April 2017	*Ichthyosaura alpestris* (N=1, 1m)	0/1	0	F. Keltsch

Site	95%-Bayesian CI	Date	Species	N *Bsal*-infected	Ø GE A and B sample	Field workers
Irrel	**0/1=0%(–)**	26 April 2015	*Ichthyosaura alpestris* (N=1, 1 w)	0/1	0	N. Wagner/G. Fichera
Irrel	**0/16=0% (0–20%)**	28 March 2016	*Salamandra salamandra* (N=16)	0/16	0	N. Wagner/J. Beninde
Irrel	**0/17=0% (0–19%)**	8, 29 March 2017	*Salamandra salamandra* (N=15)	0/15	0	N. Wagner/F. Keltsch
			Lissotriton helveticus (N=2, 1 m, 1w)	0/2	0	
Irrel	**0/30=0% (0–11%)**	12, 15 March/ 14 May 2018	*Salamandra salamandra* (N=13, 13 w)	0/13	0	N. Wagner/K. Bredimus/B. Fontaine/K. Wallrich
			Rana temporaria (N=16, 12 m, 3 w, 1 j)	0/16	0	
			Bufo bufo (N=1, 1 w)	0/1	0	
Irrel	**0/42=0% (0–8%)**	5–7 March 2019	*Salamandra salamandra* (N=9, 9 w)	0/9	0	
			Rana temporaria (N=33, 31 m, 2 w)	0/33	0	
Klingendell	**0/4=0% (0–51%)**	30 March 2016	*Salamandra salamandra* (N=4)	0/4	0	N. Wagner/U. Schulte
Körperich	**0/18=0% (0–18%)**	11 April 2017	*Ichthyosaura alpestris* (N=16, 7 m, 9 w)	0/16	0	F. Keltsch
			Lissotriton helveticus (N=2, 1 m, 1 w)	0/2	0	
Läuskopfbach	**0/23=0% (0–14%)**	2, 5 May 2017	*Ichthyosaura alpestris* (N=7, 3 m, 4 w)	0/7	0	F. Keltsch
			Lissotriton helveticus (N=16, 13 m, 3 w)	0/16	0	
Läuskopfbach	**0/22=0% (0–15%)**	20 June 2018	*Ichthyosaura alpestris* (N=4, 2 m, 2 w)	0/4	0	K. Bredimus
			Lissotriton helveticus (N=17, 6 m, 11 w)	0/17	0	
			Bufo bufo (N=1, 1 m)	0/1	0	
Läuskopfbach	0720=0% (0–16%)		*Ichthyosaura alpestris* (N=11, 7 m, 4 w)	0/11	0	S. Feldmeier
			Lissotriton helveticus (N=9, 5 m, 4 w)	0/9	0	
Lichtenborn	**0/22=0% (0–14%)**	1 April 2016	*Salamandra salamandra* (N=1)	0/1	0	N. Wagner/U. Schulte
			Ichthyosaura alpestris (N=10)	0/10	0	
			Lissotriton helveticus (N=11)	0/11	0	
Lichtenborn	**0/72=0% (0–5%)**	3 April 2018	*Salamandra salamandra* (N=31, 6 m, 9 w, 16 j)	0/31	0	N. Wagner/K. Bredimus
			Ichthyosaura alpestris (N=17, 5 m, 12 w)	0/17	0	
			Lissotriton helveticus (N=14, 2 m, 12 w)	0/14	0	
			Rana temporaria (N=2, 1 m, 1 w)	0/2	0	

Site	95%-Bayesian CI	Date	Species	N *Bsal*-infected	Ø GE A and B sample	Field workers
Lichtenborn	**0/72=0% (0–5%)**	3 April 2018	*Bufo bufo* (N=7, 7 m)	0/7	0	
			Alytes obstetricans (N=1, 1 w)	0/1	0	
Lichtenborn	**0/98=0% (0–4%)**	4–5 April 2019	*Salamandra salamandra* (N=83, 14 m, 32 w, 36 j)	0/83	0	N. Wagner/S. Feldmeier/J. Viebahn
			Ichthyosaura alpestris (N=2, 2w)	0/2	0	
			Lissotriton helveticus (N=8, 7 m, 1 w)	0/8	0	
			Rana temporaria (N=2, 1 m, 1 j)	0/2	0	
			Bufo bufo (N=4, 2 m, 2 w)	0/4	0	
Lützkampen	**0/8=0% (0–31%)**	26 April 2015	*Ichthyosaura alpestris* (N=8)	0/8	0	N. Wagner/L. Marin da Fonte/S. Lötters
Lützkampen	**0/15=0% (0–19%)**	11 May 2017	*Ichthyosaura alpestris* (N=13, 9 m, 4 w)	0/13	0	F. Keltsch
			Lissotriton helveticus (N=2, 2 m)	0/2		
Lützkampen	0/2=0% (0–70%)		*Ichthyosaura alpestris* (N=2)	0/2	0	E. Schommer
Luppertsseifen	**0/21=0% (0–16%)**	5 May 2017	*Ichthyosaura alpestris* (N=15, 10 m, 5 w)	0/15	0	F. Keltsch
			Lissotriton helveticus (N=6, 5 m, 1 w)	0/6	0	
Nimshuscheid	**0/11=0% (0–26%)**	23 May 2017	*Ichthyosaura alpestris* (N=8, 4 m, 4 w)	0/8	0	F. Keltsch
			Lissotriton helveticus (N=3, 2 m, 1 w)	0/3	0	
Nimshuscheid	0/10=0% (0–31%)		*Ichthyosaura alpestris* (N=2, 1 m, 1 w)	0/2	0	S. Feldmeier
			Lissotriton helveticus (N=8, 2 m, 6 w)	0/8	0	
Obersgegen	**0%(0–30%)**	12 April 2017	*Lissotriton helveticus* (N=9, 3 m, 6 w)	0/9	0	F. Keltsch
Obersgegen	**0/1=0%(–)**	21 June 2018	*Lissotriton helveticus* (N=1, 1 w)	0/1	0	K. Bredimus/J. Viebahn
Plütscheid	**1/3=33.3% (8–82%)**	28 April 2017	*Ichthyosaura alpestris* (N=3, 1 m, 2 w)	1(w)/3	853, 671	F. Keltsch
Plütscheid	**0/10=0% (0–31%)**	6 June 2019	*Ichthyosaura alpestris* (N=8, 5 m, 3 w)	0/8	0	S. Feldmeier/J. Viebahn
			Lissotriton helveticus (N=2, 1 m, 1 w)	0/2	0	
Prümzurlay	**0/32=0% (0–11%)**	29 March 2017	*Ichthyosaura alpestris* (N=26, 17 m, 9 w)	0/26	0	F. Keltsch
			Lissotriton helveticus (N=6, 5 m, 1 w)	0/6	0	
Ralingen	**0/3=0% (0–61%)**	28 March 2016	*Salamandra salamandra* (N=3)		0	N. Wagner/J. Beninde
Reiff	**0/16=0% (0–20%)**	9, 10 May 2017	*Ichthyosaura alpestris* (N=14, 3 m, 11 w)	0/14	0	F. Keltsch
			Lissotriton helveticus (N=2, 1 m, 1 w)	0/2	0	

Site	95%-Bayesian CI	Date	Species	N *Bsal*-infected	Ø GE A and B sample	Field workers
Sefferscheid	**0/5=0% (0–44%)**	19 April 2017	*Ichthyosaura alpestris* (N=1, 1 m)	0/1	0	F. Keltsch
			Lissotriton helveticus (N=1, 1 m)	0/1	0	
			Lissotriton vulgaris (N=3, 1 m, 2 w)	0/3	0	
Spielmannsholz	**0/6=0% (0–43%)**	10 May 2017	*Ichthyosaura alpestris* (N=4, 2 m, 2 w)	0/4	0	F. Keltsch
			Lissotriton helveticus (N=2, 1 m, 1 w)	0/2	0	
Steuenbach	**0/7=0% (0–36%)**	13 April 2016	*Salamandra salamandra* (N=7)	0/7	0	N. Wagner/J. Ewen/C. Kolwelter
Weilerbach	**0/10=0% (0–31%)**	4 May 2015	*Ichthyosaura alpestris* (N=2)	0/2	0	N. Wagner/G. Fichera
			Lissotriton helveticus (N=8)	0/8	0	
Weilerbach	**0/12=0% (0–26%)**	31 March 2017	*Ichthyosaura alpestris* (N=6, 4 m, 2 w)	0/6	0	N. Wagner/J. Beninde/F. Keltsch
			Lissotriton helveticus (N=6, 4 m, 2 w)	0/6	0	
Weilerbach	**0/4=0% (0–51%)**	26 March 2018	*Lissotriton helveticus* (N=4, 3 m, 1 w)	0/4	0	N. Wagner
Weilerbach	**0/23=0% (0–14%)**	12 March/12 April 2019	*Ichthyosaura alpestris* (N=6, 5 m, 1 w)	0/6	0	N. Wagner/S. Feldmeier/J. Viebahn
			Lissotriton helveticus (N=17, 11 m, 6 w)	0/17	0	