	Model (Red means implemented in RMark)	Code	RMark Example	Parameters										
1	Live Recaptures (CJS)	CJS	?dipper; ?example.data	Phi	p									
2	Dead Recoveries	Recovery	?brownie	S	r									
3	Both Live and Dead Encounters -- Burnham	Burnham	?Burnham	S	p	r	F							
4	Known Fate	Known	?Blackduck	S										
5	Closed Population Estimation	Closed	?edwards.eberhardt	p	c	f0								
6	BTO Dead Recoveries and Unknown Ringings	BTO		S										
7	Robust Design with Closed Population Estimation	Robust	?robust	S	Gamma''	Gamma'	p	c	f0					
8	Both Live and Dead Encounters -- Barker	Barker		S	p	r	R	R'	F	F'				
9	Multi-state with Live Recaptures	Multistrata		S	p	Psi								
10	Brownie et al. Dead Recoveries	Brownie	?brownie	S	f									
11	Jolly-Seber Lambda -- Burnham	Jolly		Phi	p	Lambda	N							
12	Huggins Closed Population Estimation	Huggins	?edwards.eberhardt	p	c									
13	Robust Design with Huggins' Estimator	RDHuggins	?robust	S	Gamma''	Gamma'	p	c						
14	Pradel Recruitment Only	Pradel		Gamma	p									
15	Pradel Survival and Seniority	PradSen		Phi	p	Gamma								
16	Pradel Survival and Lambda	PradLambda		Phi	p	Lambda								
17	Pradel Survival and Recruitment	PradRec		Phi	p	f								
18	Barker Live and Dead with Closed Robust Design	RDBarker		S	r	R	R'	Gamma''	Gamma'	F	p	c	f0	
19	POPAN	POPAN	?dipper	Phi	p	pent	N							
20	Virtual Population Analysis (VPA)	VPA		M	F									
21	Multi-state with Live and Dead Encounters	MSLiveDead		S	p	Psi	r							
22	Closed Captures with Heterogeneity	HetClosed	?edwards.eberhardt	pi	p	f0								
23	Full Closed Captures with Heterogeneity	FullHet	?edwards.eberhardt	pi	p	c	f0							
24	Nest Success	Nest	?killdeer; ?mallard	S										
25	Huggins' Closed Captures with Heterogeneity	HugHet	?edwards.eberhardt	pi	p									
26	Huggins' Full Closed Captures with Heterogeneity	HugFullHet	?edwards.eberhardt	pi	p	c								
27	Occupancy Estimation with Detection < 1	Occupancy	?salamander; ?weta	p	Psi									
28	RD Occupancy Estimation with psi, epsilon.	RDOccupPE	?RDSalamander	Psi	Epsilon	p								
29	RD Occupancy Estimation with psi, gamma.	RDOccupPG	?RDOccupancy; ?RDSalamander	Psi	Gamma	p								
30	RD Occupancy Estimation with psi(1), gamma, epsilon.	RDOccupEG	?RDSalamander	Psi	Epsilon	Gamma	p							
31	Link-Barker Jolly-Seber	LinkBarker		Phi	p	f								
32	Open Robust Design Multi-state	ORDMS		S	Psi	pent	Phi	p						
33	Closed Robust Design Multi-state	CRDMS	?crdms	S	Psi	p	c	f0						
34	Huggins' Closed Robust Design Multi-state	HCRDMS		S	Psi	p	c							
35	Heterogeneity Closed Robust Design Multi-state	HetRDMS		S	Psi	pi	p	f0						
36	Full Heterogeneity Closed Robust Design Multi-state	FHetRDMS		S	Psi	pi	p	c	f0					
37	Huggins' Het. Closed Robust Design Multi-state	HHetRDMS		S	Psi	pi	p							
38	Huggins' Full Het. Closed Robust Design Multi-state	HFHetRDMS		S	Psi	pi	p	c						
39	Robust Design with Heterogeneity Estimator	RDHet	?robust	S	Gamma''	Gamma'	pi	p	f0					
40	Robust Design with Full Heterogeneity Estimator	RDFullHet		S	Gamma''	Gamma'	pi	p	c	f0				
41	Robust Design with Huggins' Het. Estimator	RDHHet		S	Gamma''	Gamma'	pi	p						
42	Robust Design with Huggins' Full Het. Estimator	RDHFHet		S	Gamma''	Gamma'	pi	p	c					
43	Barker Live and Dead with Huggins' Robust Design	RDBarkHug		S	r	R	R'	Gamma''	Gamma'	F	p	c		
44	Barker Live and Dead with Heterogeneity Robust Design	RDBarkHet		S	r	R	R'	Gamma''	Gamma'	F	pi	p	f0	
45	Barker Live and Dead with Full Het. Robust Design	RDBarkFHet		S	r	R	R'	Gamma''	Gamma'	F	pi	p	c	f0
46	Barker Live and Dead with Huggins' Het. Robust Design	RDBarkHHet		S	r	R	R'	Gamma''	Gamma'	F	pi	p		
47	Barker Live and Dead with Huggins' Full Het. Robust Design	RDBarkHFHet		S	r	R	R'	Gamma''	Gamma'	F	pi	p	c	
48	Lukacs Young Survival from Marked Adults	LYSMA		Phi	p									
67	Robust Design Pradel Seniority Closed Population Estimation	RDPdGClosed		Phi	Gamma	p	c	f0						
68	Robust Design Pradel Seniority Huggins' Closed Populations	RDPdGHuggins		Phi	Gamma	p	c							
69	Robust Design Pradel Seniority Closed Captures with Heterogeneity	RDPdGHet		Phi	Gamma	pi	p	f0						
70	Robust Design Pradel Seniority Full Closed Captures with Het.	RDPdGFullHet		Phi	Gamma	pi	p	c	f0					
71	Robust Design Pradel Seniority Huggins' Closed Captures with Het.	RDPdGHugHet		Phi	Gamma	pi	p							
72	Robust Design Pradel Seniority Huggins' Full Closed Captures with Het.	RDPdGHugFullHet		Phi	Gamma	pi	p	c						
79	Robust Design Pradel Lambda Closed Population Estimation	RDPdLClosed		Phi	Lambda	p	c	f0						
80	Robust Design Pradel Lambda Huggins' Closed Populations	RDPdLHuggins		Phi	Lambda	p	c							
81	Robust Design Pradel Lambda Closed Captures with Heterogeneity	RDPdLHet		Phi	Lambda	pi	p	f0						
82	Robust Design Pradel Lambda Full Closed Captures with Het.	RDPdLFullHet		Phi	Lambda	pi	p	c	f0					
83	Robust Design Pradel Lambda Huggins' Closed Captures with Het.	RDPdLHugHet		Phi	Lambda	pi	p							
84	Robust Design Pradel Lambda Huggins' Full Closed Captures with Het.	RDPdLHugFullHet		Phi	Lambda	pi	p	c						
91	Robust Design Pradel Recruitment Closed Population Estimation	RDPdfClosed		Phi	f	p	c	f0						
92	Robust Design Pradel Recruitment Huggins' Closed Populations	RDPdfHuggins		Phi	f	p	c							
93	Robust Design Pradel Recruitment Closed Captures with Heterogeneity	RDPdfHet		Phi	f	pi	p	f0						
94	Robust Design Pradel Recruitment Full Closed Captures with Het.	RDPdfFullHet		Phi	f	pi	p	c	f0					
95	Robust Design Pradel Recruitment Huggins' Closed Captures with Het.	RDPdfHugHet		Phi	f	pi	p							
96	Robust Design Pradel Recruitment Huggins' Full Closed Captures with Het.	RDPdfHugFullHet		Phi	f	pi	p	c						
103	Open Robust Design Pradel Multi-state	ORDPdMS		S	Psi	Gamma	pent	Phi	p					
104	Huggins Closed Robust Design Multi-state with State Probabilities	CRDMSOHug		S	Psi	Omega	p	c						
105	Huggins Heterogeneity Closed Robust Design Multi-state with State Probabilities	CRDMSOHet		S	Psi	Omega	pi	p						
106	Huggins Full Heterogeneity Closed Robust Design Multi-state with State Probabilities	CRDMSOFHet		S	Psi	Omega	pi	p	c					
107	Occupancy Heterogeneity Estimation with Detection < 1	OccupHet	?salamander	pi	p	Psi								
108	RD Occupancy Heterogeneity Estimation with psi, epsilon	RDOccupHetPE		Psi	Epsilon	pi	p							
109	RD Occupancy Heterogeneity Estimation with psi, gamma	RDOccupHetPG		Psi	Gamma	pi	p							
110	RD Occupancy Heterogeneity Estimation with psi(1), gamma, epsilon	RDOccupHetEG		Psi	Epsilon	Gamma	pi	p						
111	Occupancy Estimation Royle/Nichols Poisson Abundance	OccupRNPoisson	?Donovan.7	r	Lambda									
112	Occupancy Estimation Royle/Nichols Negative Binomial Abundance	OccupRNNegBin	?Donovan.7	r	Lambda	VarAdd								
113	Two species Occupancy Estimation	2SpecOccup		PsiAB	PsiA	PsiB	pA	pB	rAB	rAb	raB			

114	Logit-Normal Mark Resight	LogitNormalMR	?LogitNormalMR	p	sigma	N								
115	Poisson Mark Resight with Robust Design	PoissonMR	?PoissonMR, ?Poisson_twoMR	alpha	sigma	U	Phi	Gamma''	Gamma'					
116	Multiple-State Occupancy Estimation	MSOccupancy	?NicholsMSOccupancy	Psi1	Psi2	p1	p2	Delta						
117	Occupancy Estimation Royle Poisson Counts	OccupRPoisson	?Donovan.8	r	Lambda									
118	Occupancy Estimation Royle Negative Binomial Counts	OccupRNegBin	?Donovan.8	r	Lambda	VarAdd								
119	Open Robust Design Multi-state with State Probabilities	ORDMSState		S	Psi	Omega	pent	Phi	p					
120	Immigration-Emigration Logit-Normal Mark Resight	IELogitNormalMR	?IELogitNormalMR	p	sigma	Nbar	alpha	Nstar						
121	Robust Design Multi-state Closed with Mis-classification	RDMSMisClass		S	Psi	pi	Omega	p	Delta					
122	Robust Design Multi-state Closed with 2 Mis-classifications	RDMS2MisClass		S	Psi	pi	Omega	p	Delta					
123	Multi-scale occupancy estimation	MultScalOcc	?larksparrow	Psi	Theta	p								
124	Robust Design Multiple-State Occupancy Estimation Conditional Binomial	RDMSOccRepro		Phi0	Psi	R	p	Delta						
125	Robust Design Multiple-State Occupancy Estimation General	RDMSOccupancy		Phi0	Psi	p								
126	Robust Design Multi-state Open with Mis-classification	RDMSOpenMisClass		S	Psi	pi	Omega	p	Delta	pent	Phi			
127	Density estimation with Huggins p and c	Densitypc		p	c	ptilde								
128	Density estimation with Huggins heterogeneity pi and p	DensityHet		pi	p	ptilde								
129	Density estimation with Huggins full heterogeneity pi, p and c	DensityFHet		pi	p	c	ptilde							
130	Cormack-Jolly-Seber model with Pledger mixtures	CJSMixture		pi	Phi	p								
131	Pradel Survival and Seniority with Pledger mixtures	PradSenMix		Phi	pi	p	Gamma							
132	Pradel Survival and Lambda with Pledger mixtures	PradLambdaMix		Phi	pi	p	Lambda							
133	Pradel Survival and Recruitment with Pledger mixtures	PradelRecMix		Phi	pi	p	f							
134	Link-Barker Survival and Recruitment with Pledger mixtures	LinkBarkMix		Phi	pi	p	f							
135	Cormack-Jolly-Seber model with Random Effects	CJSRandom		sigmaphi	Phi	sigmap	p							
136	Link-Barker Survival and Recruitment with Random Effects	LinkBarkRan		sigmaphi	Phi	sigmap	p	sigmaf	f					
137	Two species Conditional Occupancy Estimation	2SpecConOccup		PsiA	PsiBA	PsiBa	pA	pB	rA	rBA	rBa			
138	Burnham Live and Dead Encounters with Random Effects	BurnhamLDRE		sigmaS	S	sigmap	p	sigmar	r	sigmaF	F			
139	Pledger Mixture Dead Recoveries (Seber)	PMDead	?brownie	pi	S	r								
140	Random Effects Dead Recoveries (Seber)	REDead	?brownie	SigmaS	S	sigmar	r							
141	Robust Design Two species Gamma Epsilon Conditional Occupancy Estimation	RD2SpGEConOcc												
142	Robust Design Multi-state Open with State Uncertainty and Seasonal Effects	RDMSOpenMCSeas		S	Psi	pi	Omega	p	Delta	pent	d	alpha	c	
143	Occupancy with correlated detections	OccClus												
144	Occupancy with relaxed closure	OccRelClos												
145	Huggins' p and c with Random Effects	HugginsRE		p	c	sigmap								
146	Robust Design with Huggins' p and c with Random Effects	RDHugginsRE												
147	Closed Robust Design Multi-state Huggins' p and c with Random Effects	HRECRDMS												
148	Robust Design Pradel Seniority Huggins' p and c with Random Effects	RDPDGHUGRE												
149	Robust Design Pradel Lambda Huggins' p and c with Random Effects	RDPDLHUGRE												
150	Robust Design Pradel f Huggins' p and c with Random Effects	RDPDFHUGRE												
151	Occupancy Estimation with Detection < 1 and Random Effects	OccupancyRE												
152	Robust Design Occupancy Estimation with psi, epsilon and Random Effects	RDOccupREPE												
153	Robust Design Occupancy Estimation with psi, gamma and Random Effects	RDOccupREPG												
154	Robust Design Occupancy Estimation with psi(1), gamma, epsilon and Random Effects	RDOccupREEG												
155	Known Fate with Random Effects	KnownRE												