Fig. S1. Neural activation did not differ among mouthbrooding (Br), Maternal care (MC), and Infanticide (Inf) females in the Vs (a), Dc-4 (b), NLT-v (c), or TPp (d). Sample sizes: N = 11 Mouthbrooding (Vs, Dc-4, TPp); N = 10 Mouthbrooding (NLT-v); N = 8 Maternal Care; N = 8 Infanticide. See figure 2 for boxplot description.
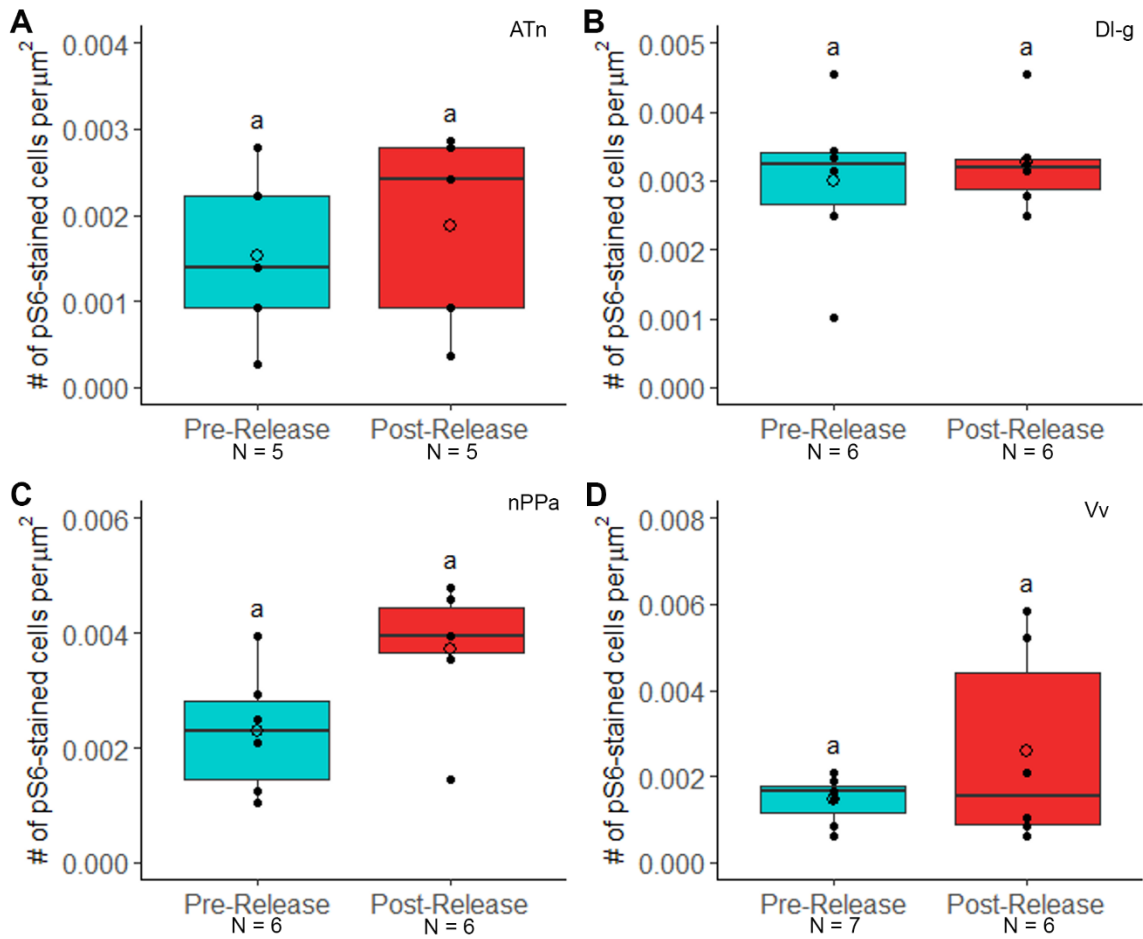
Fig. S2. Neural activation did not differ between pre- and post-release fry in the Vv (a), Dl-g (b), nPPa (c), or ATn (d). Samples sizes: N = 7 Pre-Release (Vv); N = 6 Pre-Release (Dl-g, nPPa); N = 5 Pre-Release (ATn); N = 6 Post-Release (Dl-g, nPPa, Vv), N = 5 Post-Release (ATn). See figure 2 for boxplot description.

Table S1. Brain regions analyzed in adult females, putative homologs, and magnifications, gridline sizes, and box numbers used to quantify regions of interest.

Region	Putative homolog	Mag.	Gridlines (μm)	Boxes
ATn	Ventromedial hypothalamus	20x	50 x 50	4
Dc-4	Globulus pallidus cortex, in part	10x	100 x 100	3
Dc-5	Globulus pallidus cortex, in part	10x	100 x 100	3
Dl-g	Medial pallium, hippocampus	10x	100 x 100	5
NLTv	Arcuate nucleus, in part	20x	40 x 40	4
nPPa	Preoptic area	20x	50 x 50	5
TPp	Ventral tegmental area	20x	50 x 50	5
Vd-r	Nucleus accumbens, striatum	20x	50 x 50	4
Vs	Medial extended amygdala, in part	20x	50 x 50	4

Table S2. Regions analyzed in pre- and post-release fry, putative homologs, and magnifications, gridline sizes, and box numbers used to quantify regions of interest

Region	Putative homolog	Mag.	Gridlines (μm)	Boxes
nPPa	Preoptic area	20x	20 x 20	3
ATn	Ventromedial hypothalamus	20x	30 x 30	3
Dl-g	Medial pallium, hippocampus	20x	30 x 30	3
Dm	Pallial amygdala	20x	30 x 30	4
INL	Inner nuclear layer of retina	20x	50 x 50	3
PGZ (Tectum)	Superior colliculus	20x	30 x 30	3
TPp	Ventral tegmental area	20x	30 x 30	3
Vd-r	Nucleus accumbens, striatum	20x	15 x 15	3
Vs-m	Medial extended amygdala, in part	20x	50 x 50	3
Vv	Septum, external globus pallidus, in part	20x	20 x 20	3

Table S3. Spearman correlation coefficients (ρ) and P-values for correlations of pS6 stained cell density across 9 brain regions in mouthbrooding, maternal care providing, and infanticide exhibiting females. Bold indicates significance at P < 0.05.

Mouthbrooding		TPp	Vd-c	nPPa	Dc4	Dc5	ATn	NLT-v	Dl-g
Vd-c	ρ	-0.296							
	P	0.353							
nPPa	ρ	-0.510	0.291						
	P	0.102	0.369						
Dc4	ρ	0.059	-0.145	-0.118					
	P	0.839	0.653	0.714					
Dc5	ρ	0.478	-0.291	0.191	0.300				
	P	0.124	0.369	0.557	0.353				
Atn	ρ	**0.656**	-0.300	**-0.636**	0.127	0.200			
	P	**0.026**	0.353	**0.032**	0.693	0.538			
NLT-v	ρ	0.091	-0.218	-0.491	-0.027	-0.164	**0.727**		
	P	0.776	0.502	0.116	0.924	0.614	**0.009**		
Dl-g	ρ	0.404	**-0.729**	-0.232	-0.200	0.346	**0.624**	0.579	
	P	0.210	**0.009**	0.467	0.538	0.283	**0.035**	0.056	
Vs	ρ	**0.647**	-0.591	-0.491	-0.145	0.209	**0.864**	**0.600**	**0.870**
	P	**0.029**	0.051	0.116	0.653	0.520	**<0.001**	**0.047**	**<0.001**

Maternal Care		TPp	Atn	NLT-v	Dl-g	Vs	Vd-c	nPPa	Dc-4
Atn	ρ	**0.650**							
	P	**0.050**							
NLT-v	ρ	0.603	0.318						
	P	0.077	0.381						
Dl-g	ρ	**0.817**	**0.750**	0.259					
	P	**0.004**	**0.016**	0.462					
Vs	ρ	0.435	0.285	0.244	0.151				
	P	0.223	0.434	0.491	0.676				
Vd-c	ρ	0.367	0.383	0.276	0.250	0.485			
	P	0.308	0.285	0.434	0.491	0.169			
nPPa	ρ	**0.783**	**0.667**	0.377	**0.767**	-0.109	0.200		
	P	**0.009**	**0.043**	0.285	**0.012**	0.742	0.580		
Dc-4	ρ	0.433	0.367	-0.084	0.500	0.285	**0.783**	0.367	
	P	0.223	0.308	0.809	0.153	0.434	**0.009**	0.308	
Dc-5	ρ	0.183	0.250	-0.259	-0.017	0.628	0.233	-0.017	0.350
	P	0.612	0.491	0.462	0.948	0.058	0.520	0.948	0.331

Infanticide		TPp	Atn	NLT-v	Dl-g	Vs	Vd-c	nPPa	Dc-4
Atn	ρ	0.181							
	P	0.557							
NLT-v	ρ	0.080	0.531						
	P	0.800	0.071						
Dl-g	ρ	-0.085	0.368	-0.294					
	P	0.783	0.224	0.340					
Vs	ρ	0.429	0.428	0.093	0.420				
	P	0.157	0.157	0.766	0.165				
Vd-c	ρ	0.362	0.187	-0.181	0.194	**0.832**			
	P	0.233	0.542	0.557	0.527	**<0.001**			
nPPa	ρ	0.203	**0.764**	0.566	-0.051	0.437	0.451		
	P	0.513	**0.003**	0.051	0.869	0.150	0.130		
Dc-4	ρ	0.299	0.330	0.118	0.158	0.455	**0.605**	**0.618**	
	P	0.329	0.284	0.699	0.603	0.130	**0.033**	**0.031**	
Dc-5	ρ	-0.051	-0.095	0.240	-0.158	-0.002	0.129	0.194	**0.664**
	P	0.869	0.749	0.442	0.603	0.991	0.683	0.527	**0.017**

Table S4. Spearman correlation coefficients (ρ) and P-values for correlations of pS6 stained cell density across 10 regions in pre-release and post-release fry. Bold indicates significance at p < 0.05.

Pre-Release		Dl-g	Atn	nPPa	TPp	PGZ	INL	Dm	Vs	Vd
Atn	ρ	-0.210								
	P	0.578								
nPPa	ρ	0.000	-0.049							
	P	0.977	0.885							
TPp	ρ	0.099	0.642	0.648						
	P	0.794	0.072	0.072						
PGZ	ρ	**0.745**	-0.286	0.313	0.222					
	P	**0.029**	0.460	0.423	0.578					
INL	ρ	-0.242	-0.356	-0.060	-0.309	0.121				
	P	0.537	0.353	0.839	0.423	0.749				
Dm	ρ	0.482	-0.366	0.575	0.295	**0.761**	-0.240			
	P	0.207	0.353	0.120	0.460	**0.021**	0.537			
Vs	ρ	-0.037	-0.200	**0.761**	0.289	0.312	0.380	0.268		
	P	0.885	0.619	**0.021**	0.460	0.423	0.321	0.498		
Vd	ρ	-0.432	0.475	-0.233	0.076	-0.403	0.552	**-0.805**	0.125	
	P	0.260	0.207	0.537	0.839	0.290	0.139	**0.010**	0.749	
Vv	ρ	-0.567	-0.161	**0.715**	0.273	-0.231	0.230	0.133	0.506	0.037
	P	0.120	0.662	**0.037**	0.498	0.537	0.537	0.705	0.182	0.885
Post-Release		Dl-g	Atn	nPPa	TPp	PGZ	INL	Dm	Vs	Vd
Atn	ρ	0.396								
	P	0.341								
nPPa	ρ	0.162	0.691							
	P	0.660	0.074							
TPp	ρ	0.649	0.127	0.309						
	P	0.096	0.720	0.438						
PGZ	ρ	-0.607	-0.324	0.234	-0.468					
	P	0.121	0.438	0.545	0.255					
INL	ρ	0.679	0.378	0.090	0.450	-0.429				
	P	0.074	0.341	0.781	0.255	0.297				
Dm	ρ	-0.286	0.090	0.126	-0.667	0.536	-0.286			
	P	0.491	0.781	0.720	0.074	0.181	0.491			
Vs	ρ	0.649	0.564	0.382	0.345	-0.252	0.667	-0.378		
	P	0.096	0.150	0.341	0.388	0.545	0.074	0.341		
Vd	ρ	-0.559	0.036	0.118	**-0.800**	0.613	-0.667	0.577	-0.145	
	P	0.150	0.905	0.781	**0.025**	0.121	0.074	0.150	0.720	
Vv	ρ	0.036	0.613	0.613	-0.360	0.321	-0.143	**0.786**	0.072	0.559
	P	0.905	0.121	0.121	0.388	0.438	0.720	**0.025**	0.843	0.150