









		Dose of muscimol (mM):				
		0.1-0.2	0.5	1.0	2.0	3.0
	g82b82				ND	S
	p170y50			ND	D	D
	p148y88				ND	S
	bl43p196			D	S	S
	g32b89				ND	S
	y70gy49			ND	S	D
	pu43g13		ND	S		S
	o174br12		ND	S	S	
	pu42g12			ND	S	

Supplementary Figure 1. Depiction of singing behavior and datasets analyzed for experiments involving muscimol. Not all birds were given all doses, and outlined boxes indicate doses that each bird received. Black boxes with “S” denote experiments in which infusion of muscimol suppressed song (<6 songs produced during the experimental period); song structure was not analyzed on these days. However, birds produced >10 songs during the experimental period following the administration of other doses, and these days are denoted in white or grey boxes. Grey boxes with “D” indicate experiments in which birds produced degraded song (i.e., songs in which syllables were difficult to reliably identify and label) following muscimol infusions, whereas white boxes indicate experiments in which song was not spectrally degraded. For our analysis of non-degraded song (see Results), we examined song structure following infusions of the highest dose of muscimol that did not suppress song or lead to the production of degraded song [white boxes with “ND” (non-degraded)]. Colors next to bird names correspond to colors on Figure 1 (depiction of probe locations).

Variation in the location of probes relative to HVC could lead to variation in the magnitude of effect of muscimol infusions. Therefore, based on the rostrocaudal-mediolateral map of probes (Figure 1), we categorized four birds as having probes located within the boundaries of HVC (green, blue, orange, and red dots) and four birds as having probes located near but outside the boundaries of HVC. (Probe depths did not differ across these categories.) While birds did not all receive the same regimen of doses, all birds did receive a 1-mM infusion of muscimol; therefore, we compared effects on song at this dose between birds that were categorized as having probes within or outside the boundaries of HVC. Infusions of muscimol generally either suppressed song, led to the production of spectrally degraded song, or led to the production of non-degraded song. Among the birds categorized as having probes within the boundaries of HVC, one bird produced degraded song and three birds produced non-degraded song, whereas among birds categorized as having probes outside the boundaries of HVC, two birds were quiet and two birds produced non-degraded song. Therefore, there was no conspicuous difference in responses to muscimol depending on the location of probes relative to HVC.

There was, however, a suggestion that infusing 1 mM of muscimol was more likely to suppress song or lead to the production of degraded songs if probes were positioned more superficially, regardless of their rostrocaudal-mediolateral location.