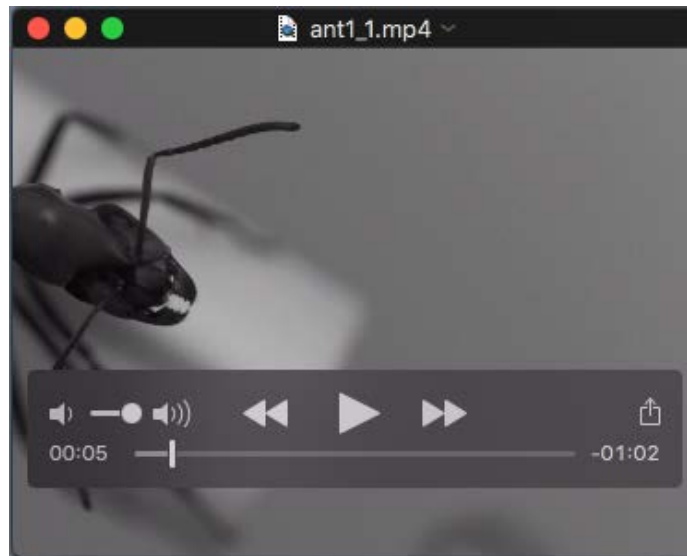


SUPPLEMENTARY INFORMATION



Movie 1. Response to the CS from one ant during paired training, showing the three types of MaLER.

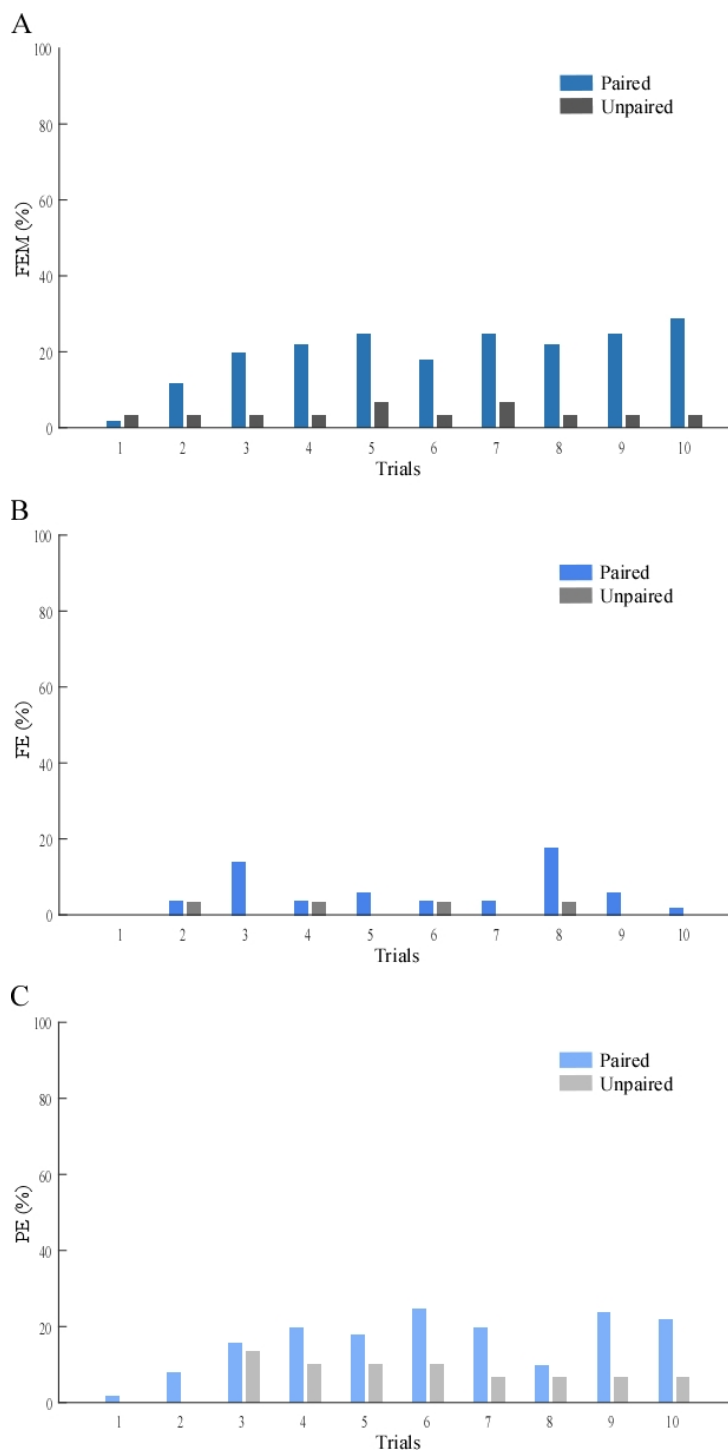


Fig. S1. Learning curves based on each type of MaLER. A) The percentage of paired ants (N=51) performing FEM in response to the CS presentation increased throughout training, but not for unpaired ants (N=29). B) The percentage of ants (paired: N=51; unpaired: N=29) performing FE in response to the CS presentation didn't increase during training for both paired and unpaired ants. C) The percentage of paired ants (N=51) performing PE in response to the CS presentation increased throughout training, but not for unpaired ants (N=29).

| Type of training | Type of MaLER | N | df | z | p |
|------------------|---------------|----|----|-------|----------|
| Paired | FEM | 51 | 50 | 3.868 | 0.0001** |
| | FE | 51 | 50 | 0.835 | 0.404 |
| | PE | 51 | 50 | 2.975 | 0.0029** |
| Unpaired | FEM | 29 | 28 | 0.129 | 0.8977 |
| | FE | 29 | 28 | 0.349 | 0.7267 |
| | PE | 29 | 28 | 0.839 | 0.402 |

Table S1. Influence of training in ants' responses to the CS, for each type of MaLER. The number of ants (N), degrees of freedom (df), Logistic regression (z) and p-value are shown.