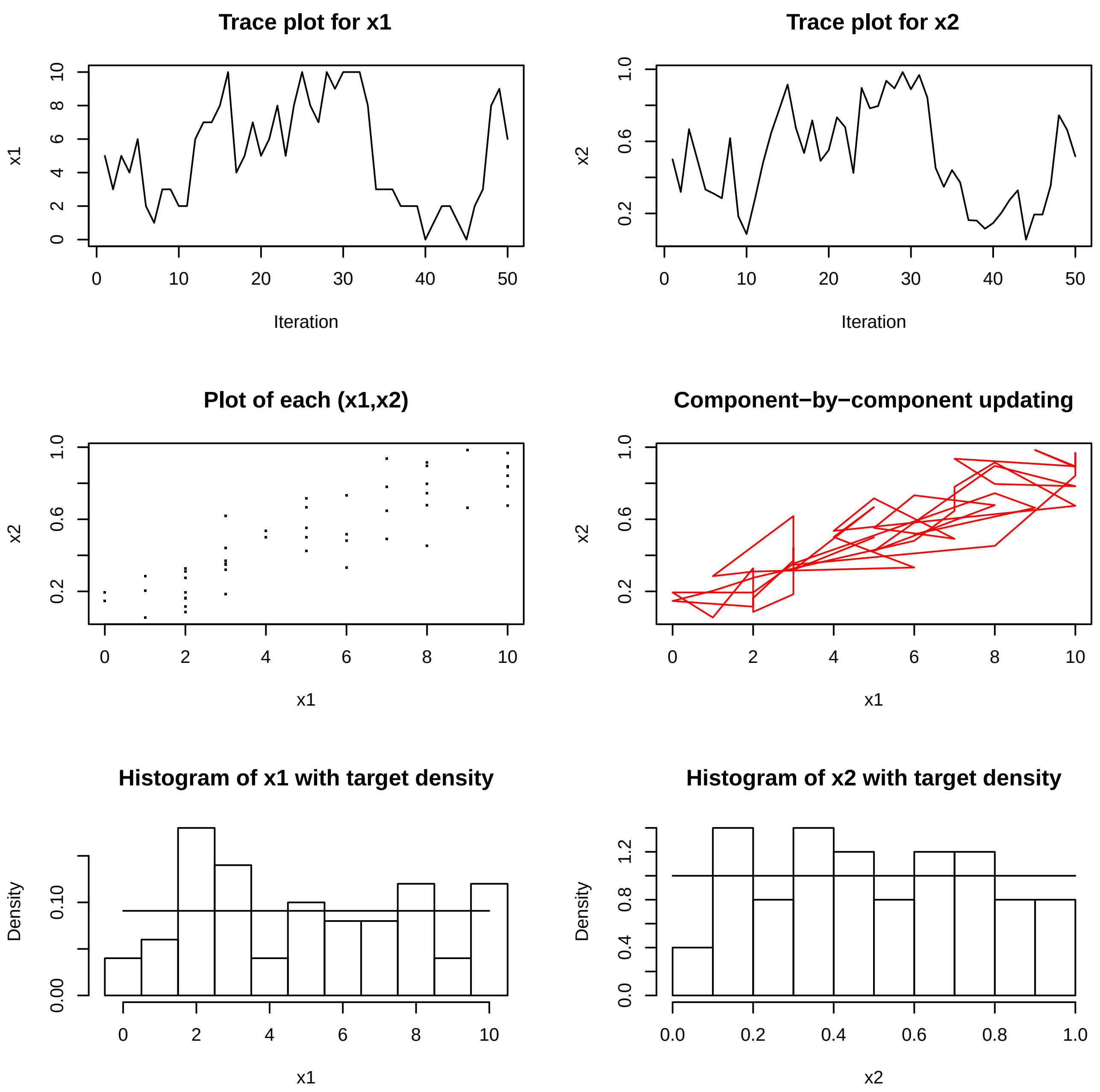

Figure 1: Fifty iterations from a Gibbs sampler for $x_1 \mid x_2 \sim Bin(n, x_2)$, $x_2 \mid \; x_1 \sim Beta(x_1 + \alpha, n - x_1 + \beta)$ where $n = 10$ and $\alpha = \beta = 1$. The marginal distributions are $x_1 \sim Beta - binomial(n, \alpha, \beta)$ and $x_2 \sim Beta(\alpha, \beta)$. For $\alpha = \beta = 1$, x_1 is the discrete uniform on $\{0, 1, \ldots, n\}$ and $x_2 \sim U(0, 1)$.

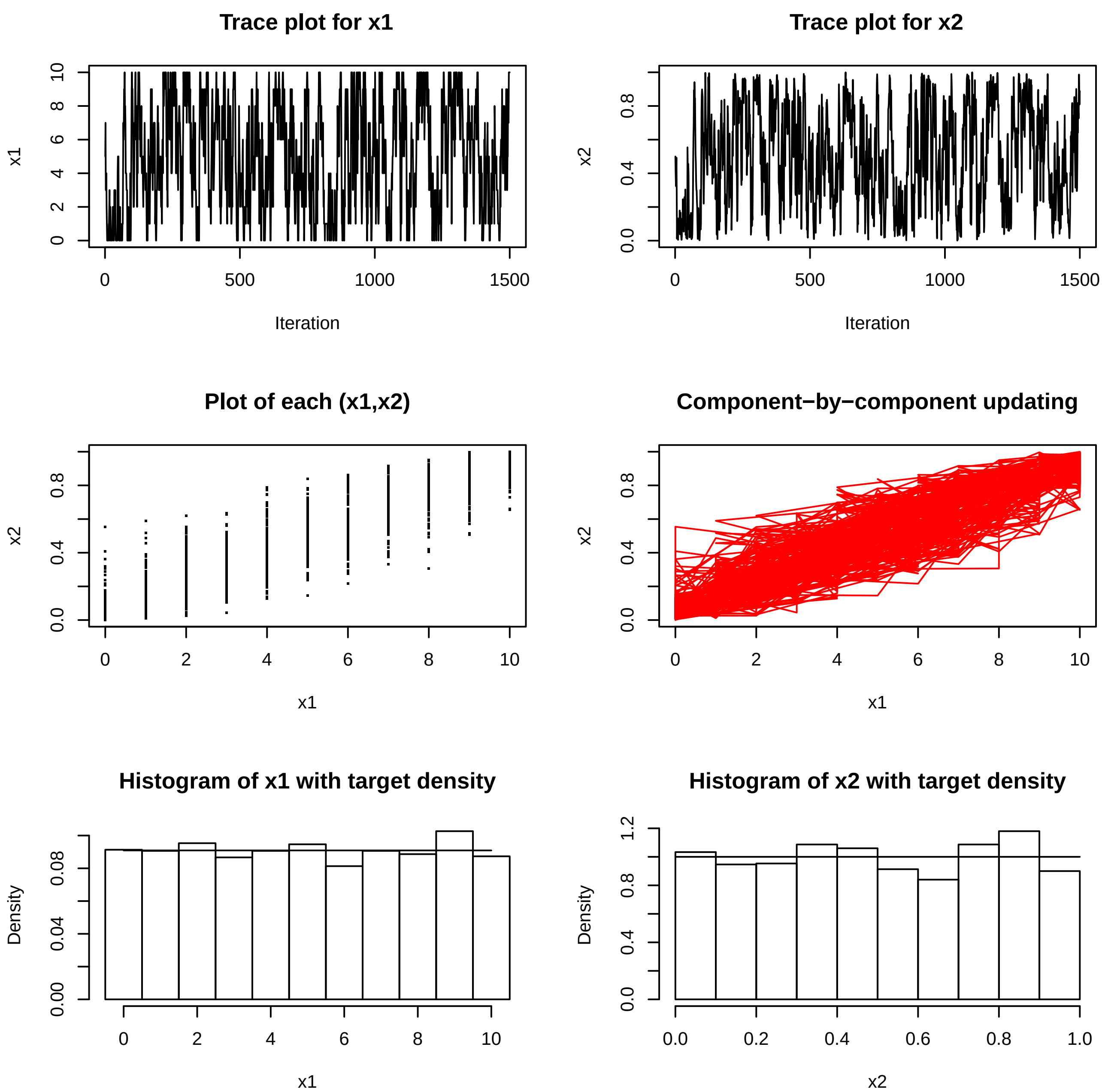

Figure 2: 1500 iterations from a Gibbs sampler for $x_1 \mid x_2 \sim Bin(n, x_2)$, $x_2 \mid \; x_1 \sim Beta(x_1 + \alpha, n - x_1 + \beta)$ where $n = 10$ and $\alpha = \beta = 1$. The marginal distributions are $x_1 \sim Beta - binomial(n, \alpha, \beta)$ and $x_2 \sim Beta(\alpha, \beta)$. For $\alpha = \beta = 1$, x_1 is the discrete uniform on $\{0, 1, \ldots, n\}$ and $x_2 \sim U(0, 1)$.

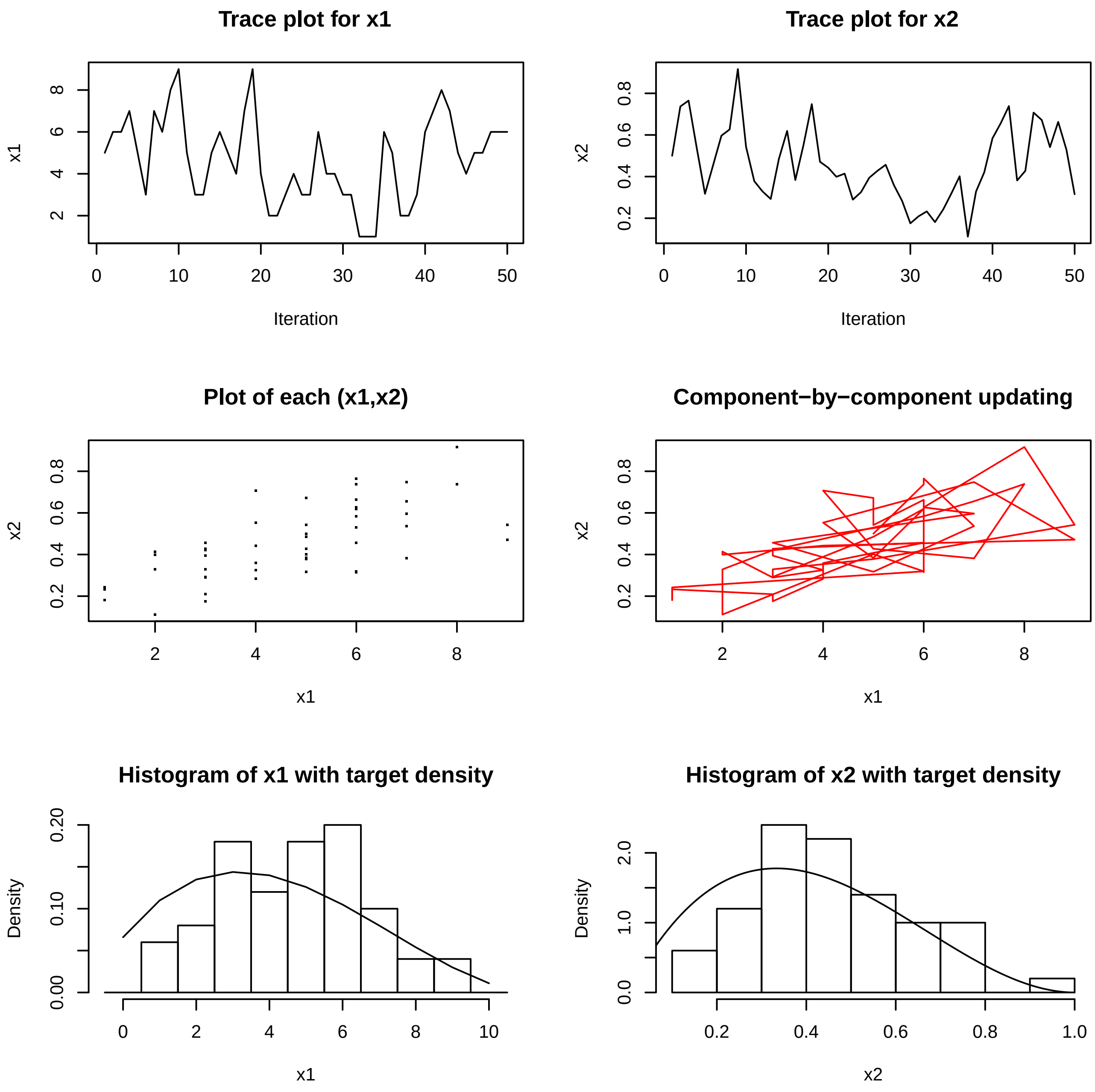

Figure 3: Fifty iterations from a Gibbs sampler for $x_1 \,|\, x_2 \sim Bin(n, x_2)$, $x_2 \,|\; x_1 \sim Beta(x_1 + \alpha, n - x_1 + \beta)$ where $n = 10$, $\alpha = 2$ and $\beta = 3$. The marginal distributions are $x_1 \sim Beta - binomial(n, \alpha, \beta)$ and $x_2 \sim Beta(\alpha, \beta)$.

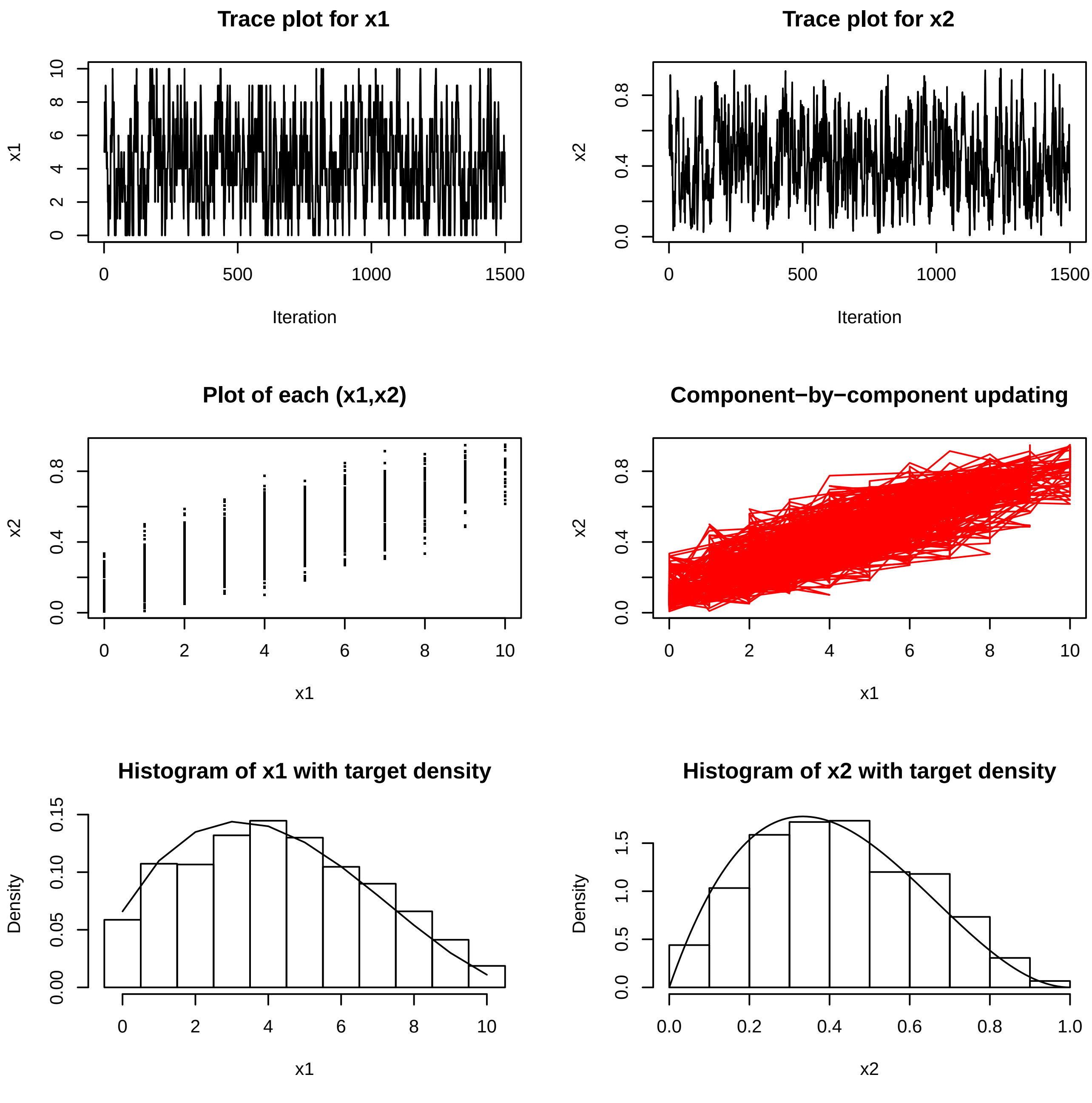

Figure 4: 1500 iterations from a Gibbs sampler for $x_1 \,|\, x_2 \sim Bin(n, x_2)$, $x_2 \,|\; x_1 \sim Beta(x_1 + \alpha, n - x_1 + \beta)$ where $n = 10$, $\alpha = 2$ and $\beta = 3$. The marginal distributions are $x_1 \sim Beta - binomial(n, \alpha, \beta)$ and $x_2 \sim Beta(\alpha, \beta)$.