The populations of a host \( H(t) \) and a parasite \( P(t) \) are described by the following equations:

\[
\begin{align*}
\dot{H} &= (1 - P)H, \\
\dot{P} &= P \left( 1 - \frac{2P}{1 + H} \right).
\end{align*}
\]

Find the three fixed points for \( H \geq 0, P \geq 0 \) and determine their nature. Sketch the phase diagram and discuss the phase flow.

**Solution:**