Problem of the Month - April 2024*

A local forested area is populated with H hawks and D doves. Whenever a hawk meets a dove, the dove is killed. Whenever two hawks meet, they fight to death and both are killed. If two doves meet, nothing happens and both survive the encounter.

Suppose that you are either a hawk or a dove in the above scenario. Assuming that meetings are random and that no more than one meeting occurs at a time, what are your chances of survival?

ADDENDUM/CLARIFICATION: Assume that meetings between birds continue to happen until they cannot. That is, hawks and doves will continue to have random encounters until there is at most one bird left. The question is to determine the chances of you being that last survivor.