Birds of a Feather, 1687

A collection of bluetits and blackbirds (at least one of each) are sitting in line on a telephone wire. It so happens that if you consider any pair of birds with exactly 15 or 20 birds between them, then that pair are the same type. However, if any additional bird joined them, no matter what order they sat in, it would be impossible for this property still to be true. How many birds are on the wire?