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We define the relationship between nitrogen enrichment in planetary nebulae and the mass of the nucleus. N/O remains flat at about 0.3 (double solar) from a core mass of 0.55 M(sun) to 0.8 M(sun), whereupon it rises quickly to values that approach and may exceed 2. The rate of increase of N/O with core mass exceeds that predicted for giant stars by standard dredge-up and mass-loss theories.