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What does a typical Riemann surface look like? In a recent work, Brooks and Makover (Random Construction of Riemann Surfaces) model a process of picking random Riemann surfaces by constructing Belyi surfaces from cubic graphs. In this work, we use Bollobas method of generating random regular graphs to examine the structure of the surfaces, and to estimate the expected value of the genera of the Belyi surfaces. Let Γ_n be a graph with n vertices, and \mathcal{O} be a random orientation on the graph. $S^C(\Gamma_n, \mathcal{O})$ is the compact Belyi surface constructed from (Γ_n, \mathcal{O}) . Then our main result is:

$$\mathbf{E}(\text{genus}(S^C(\Gamma_n, \mathcal{O}))) \sim O(n)$$

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