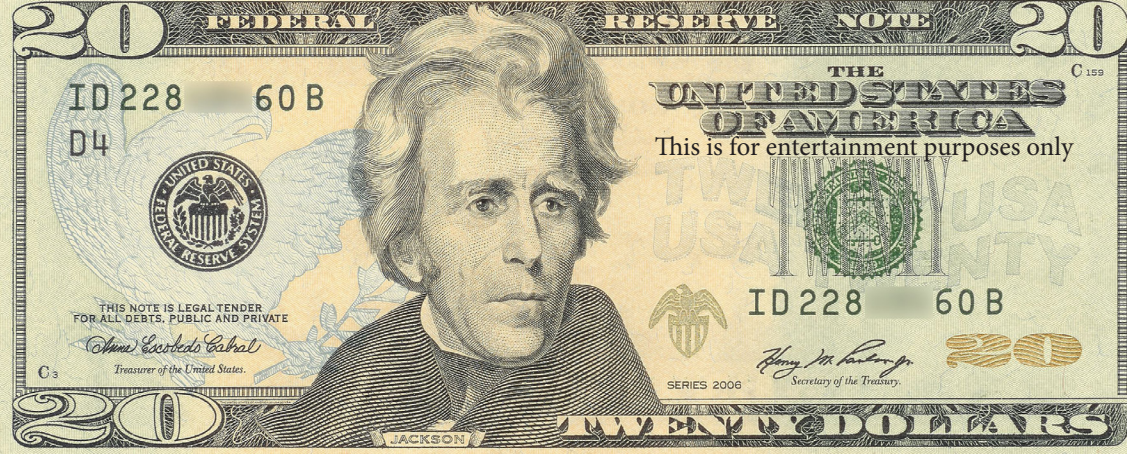


## COLLECTION PLATE 20 DOLLAR EVOLUTION PLOY

FOLD 2

**DON'T BE FOOLED!  
THERE IS NO GOD. STOP  
BILKING POOR PEOPLE  
OUT OF THEIR MONEY AND  
DO SOMETHING GOOD  
FOR A CHANGE.**



FOLD 1

### THE THEORY OF EVOLUTION BY NATURAL SELECTION

Evolution is change in the heritable characteristics of biological populations over successive generations. These characteristics are the expressions of genes that are passed on from parent to offspring during reproduction. Different characteristics tend to exist within any given population as a result of mutation, genetic recombination and other sources of genetic variation. Evolution occurs when evolutionary processes such as natural selection (including sexual selection) and genetic drift act on this variation, resulting in certain characteristics becoming more common or rare within a population. It is this process of evolution that has given rise to biodiversity at every level of biological organisation, including the levels of species, individual organisms and molecules.

The scientific theory of evolution by natural selection was conceived independently by Charles Darwin and Alfred Russel Wallace in the mid-19th century and was set out in detail in Darwin's book *On the Origin of Species* (1859). Evolution by natural selection was first demonstrated by the observation that more offspring are often produced than can possibly survive. This is followed by three observable facts about living organisms: (1) traits vary among individuals with respect to their morphology, physiology and behaviour (phenotypic variation), (2) different traits confer different rates of survival and reproduction (differential fitness) and (3) traits can be passed from generation to generation (heritability of fitness). [8] Thus, in successive generations members of a population are more likely to be replaced by the progenies of parents with favourable characteristics that have enabled them to survive and reproduce in their respective environments. In the early 20th century, other competing ideas of evolution such as mutationism and orthogenesis were refuted as the modern synthesis reconciled Darwinian evolution with classical genetics, which established adaptive evolution as being caused by natural selection acting on Mendelian genetic variation.

CUT OUT ENTIRE IMAGE.