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Colombian Biological Exchange

What was the Colombian Biological Exchange, and what affects did it have on the old and new worlds?

The Colombian Biological Exchange (CBE) was term given to the movement of biological materials in the form of plants, animals and disease between North American and Europe and the reverse in the fifteenth and sixteenth centuries by Alfred Crosby. Some parts of the exchange were intentional, maize was intentionally moved to Europe, and cocoa was intentionally propagated to the Americas. There were some things that were unintentionally shared between the lands, including smallpox, weeds (ragweed, kudzu) and a variety of rodents. The most obvious change caused by the CBE is the added diversity of foods in both areas. A less positive result of the CBE is the exchange of diseases, which killed many Native Americans. The bringing of diseases, especially smallpox, to the New World placed the Europeans at an advantage to clear out the native people and begin their own settlements on the North American continent.

The impact of the Colombian Biological Exchange was not short term. The changes shaped the futures of both worlds. As a result of the exchange, some of the recipient regions have developed more of a dependence on some of the organisms exchanged than the source region, for example, the average US citizen consumes about fourty-four kilograms of beef per year, whereas the average UK citizen consumes only about sixteen kilograms of beef [UN-FAO]. Some of the most "popular" items of many regions, were not in those regions before the exchange. Florida had no oranges, and Italy had no

tomatoes. It was an event that jumbled the world's resources and allowed them to be handled with fresh ideas. The basis of the intentional components of the exchange was on survival. Corn and potatoes gave great substance to many European diets (a substance that would be greatly missed in the Irish Potato Famine), and importing livestock to the New World provided the early settlers to have a familiar source of meat and dairy. As the new organisms took hold in their new habitat, the residents of those new habitats found ways to integrate the new with the old. Spices were more abundant in Europe, allowing the Italians to perfect a tomato sauce, something not easily possible on the American continents.

In modern society, imported vehicles are often seen as luxurious. Perhaps such a feeling existed for the Native Americans when the horse arrived in the Americas. The horse allowed many Natives to become nomadic, chase bison, and defend their lands. Horses also played a large role in the American revolution and in the herding of other livestock [Crosby].

A less considered component of the exchange is the exchange of people. Slaves from Africa were brought to the New World, often to tend to the new crops, such as rice, wheat and cotton. This exchanging of people helped to create the diverse populations that inhabit much of the world in the present day.

The exchange had mainly a positive impact on the world. The most devastating part of the exchange was the unintentional and perhaps intentional movement of diseases to the New World. Large populations died due to an ignorance of biological adaptation. Many organisms had some adaptation or change when they were relocated. For example, when tomatoes were first introduced to Europe, their interactions with pollen from olive trees

caused their fruit to change shape and become elongated [Goldman, 74].

With the Colombian Biological Exchange, everything changed. Life in both the new world and the old world was forever changed. The exchange brought an end to geographical biodiversification [Crosby].

[1]United Nations, Food and Agriculture Organization, FAOStats, 21 June 1998.

[2] Alfred Crosby , The Columbian Exchange: Plants, Animals, and Disease between the Old and New Worlds, http://www.eoearth.org/article/Columbian_exchange~_plants,_animals,_and_disease_between_the_Old_and_New_World, accessed October 2, 2008

3 Amy Goldman, The Heirloom Tomato: Recipies, Portraits and History of the World's Most Beautiful Fruit, 2008