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## Collateral damages: Military invasions beget biological invasions

Santini, A.<sup>1</sup>, Maresi G.<sup>2</sup>, Richardson D.M.<sup>3</sup>, Liebhold A.M.<sup>4</sup>

1 – Institute for Sustainable Plant Protection – National Research Council, Sesto fiorentino, Italy, alberto.santini@cnr.it; 2 – Centre for Technology Transfer, Fondazione Edmund Mach, San Michele all’Adige, Italy, giorgio.maresi@fmach.it; 3 – Centre for Invasion Biology, Department of Botany & Zoology, Stellenbosch University, Stellenbosch, South Africa, rich@sun.ac.za; 3 – Department of Invasion Ecology, Institute of Botany, The Czech Academy of Sciences, Průhonice, Czech Republic.; 4 – US Forest Service Northern Research Station, Morgantown, USA, aliebhold@gmail.com; Faculty of Forestry and Wood Sciences, Czech University of Life Sciences Prague, Praha, Czech Republic

### Abstract

War is a key elements of world history and it often involves invasion of enemy territories. Biological invasions are frequently associated with human invasions; there are many examples of species that were either intentionally or accidentally translocated during European colonization of distant lands. Much like colonialism, military activity is intimately associated with the occurrence of biological invasions. In particular, world wars that moved thousands of people, supplies, and foodstuff among continents, have resulted in the global spread of several plant, insect and pathogen species and even vertebrate animals. However, lesser military actions often require huge movements of troops and related material over a short time between distant continents or geographical areas, creating ideal conditions for the accidental transport of species. Here we report several examples of intentional and unintentional introductions of non-native species associated with military operations, including those in which invasive pests were used as weapons. Considering the devastating effect of wars, the introduction of invasive species could be considered minor collateral damage, but many invasions have profound and lasting effects on ecosystems and economies of invaded regions. Regulation of military practices that promote invasions through existing international conventions may not be possible.

**Keywords:** hitchhiking organisms; invasibility; military invasion; military supply; unregulated pathway of introduction