

Drones help write new history of Caribbean

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Credit: Leiden University

Drones are proving to be a good means of mapping man-made changes in the landscape. Geophysicist Till Sonneman and his colleagues (archaeology) are experimenting with drones in inaccessible areas of the Caribbean.

Columbus as turning point

In the widescale NEXUS1492 research project Professor of Caribbean Archaeology Corinne Hofman and her team are exploring the cultures and societies of the many [indigenous peoples](#) in the Caribbean region

around 1500. What was life like in this area before Columbus landed there in 1492, and what happened afterwards?

New techniques

In the course of the research it became apparent that more traditional techniques such as excavations - in some cases with heavy material - and explorations in the field were not able to provide a complete picture. On the Caribbean island of Hispaniola, for example, [dense forests](#) and steep hills make traditional forms of research difficult and expensive.

Columbus established the first European settlement there, but where had the original peoples settled, how did they live and how did the interaction with Europeans turn out?

Organised communities

To supplement traditional archaeological methods, Dr Till Sonneman and his colleagues developed more advanced techniques of surveying areas using drones. These [drones](#) provide photos and measurements ('photogrammetrical models') on the basis of which maps can be drawn. On these maps Sonnemann and his colleagues saw man-made interruptions to the natural landscape: these reveal a clear organisation of living space at the settlement sites, consisting of mounds and flat areas. Understanding the relation of the mounds and adjacent flat areas within their environment allows a discussion on how, and for what purpose, the settlement was established at a particular location, and provides clues about its spatial organisation.



Drone with camera and measuring equipment. Credit: Leiden University

Colonial encounter

After Columbus landed in the Caribbean during his famous round the world trip, things did not go well with the native inhabitants in the whole Caribbean region. Hundreds of thousands of indigenous people died as a result of the colonial encounters, due to imported diseases, mistreatment, slavery and famine.



Bird's eye view of an excavation made using a drone. Credit: Leiden University

More information: Till Sonnemann et al. Mapping Indigenous Settlement Topography in the Caribbean Using Drones, *Remote Sensing* (2016). [DOI: 10.3390/rs8100791](https://doi.org/10.3390/rs8100791)

Provided by Leiden University

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