

The Little Book of Smiley Plots

A collection of ancient DNA patterns and their causes

The SPAAM Community

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Preface

A key part of any ancient DNA project is to show that the DNA is exactly that - ancient. A key authentication method is to show the presence of elevated C to T deamination patterns (and the complementary G to A) at the end of DNA molecules.

These patterns can be plotted in what have been colloquially known as 'Smiley Plots. However, there can be a wide range of smiley plots, some which show valid ancient DNA, and others that do not - either due to not actually having true ancient DNA but also from laboratory and/or bioinformatic artifacts.

This book aims

Introduction

What are deamination patterns?

Part I

Valid Smiley Plots

1 Smiley Plot of Double Stranded DNA Libraries

2 Single Stranded DNA Libraries

Part II

Problematic Plots

3 Smiley Plot of Insufficient Reads

References