

## SMALL BIALGEBRAS WITH A PROJECTION

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ABSTRACT. Let  $A$  be a bialgebra with an  $H$ -bilinear coalgebra projection over an **arbitrary** subbialgebra  $H$  with antipode. In characteristic zero, we completely describe the bialgebra structure of  $A$  whenever  $H$  is either f.d. or cosemisimple and the  $H$ -coinvariant part  $R$  of  $A$  is connected with one dimensional space of primitive elements.