Bridged N-thiocarbamoyl substituted bis-benzamidines (C₅H₅)₂N-C(S)-N=C(Ph)-NH-R-NH-C(Ph)=N-C(S)-N(C₂H₅)₂ with different moieties R (H₂L¹: R = diphenylmethane-2,2'-diyl, H₂L²: R = diphenylmethane-3,3'-diyl, and H₂L³: R = diphenylmethane-4,4'-diyl) were synthesized by the reaction of N-(thiocarbamoyl)benzimidoyl chlorides with diamines. These quadridentate ligands form neutral mononuclear (CuL¹), dinuclear (Cu₂L₂³) and trinuclear (Cu₃L²³) copper(II) chelates in dependence of the different bridging unit in the ligands. The compounds were characterized by NMR, IR, EPR and XPS spectroscopy and FAB mass spectrometry. The molecular structures of the ligand H₂L³ and the complex CuL¹ have been determined by X-ray methods.