and in one of the other cases in which the urine was rich in albumin, a microscopic examination was unfortunately not made. In only one case was the urine obtained in the bladder free from both albumin and casts. At autopsy only two of the animals had any fluid in the peritoneal cavity, but in four there were distinct macroscopic dimples in the cortex of the kidneys to which the capsule was adherent, and in one of these the kidneys were small, pale and distinctly granular.

The microscopic picture (Figs. 5 and 6) showed marked proliferation of the interstitial connective tissue with distinct dimpling of the surface of the kidney and marked tubular and glomerular destruction. In one case the new growth of fibrous tissue seemed to be more marked in the inner zone of the cortex, but in the other four it was quite diffuse, and in two cases it extended to the intertubular connective tissue in the medulla. The most striking feature was the advanced degree of glomerular change, a fact that is all the more remarkable when we remember that in the acute intoxication there was comparatively little involvement. The glomerular changes included thickening of the capsules with hyaline degeneration of the basement membranes and proliferation of the endothelium in every case, new formation of elastic tissue around some of the glomerular capsules in four cases, cystic formation in three cases, rather marked proliferation of the connective tissue of the tufts in two cases, and complete hyaline degeneration of a few of the tufts in one case. The convoluted tubules were severely damaged in four cases, and moderately so in one. There was marked atrophy and practical obliteration of many of the tubules, and dilatation with degeneration of the epithelium in many others. The dilated lumens of the latter contained exudate and desquamated cells. Many of the ascending limbs of Henle's loops were dilated and contained exudate and débris, and some of them were blocked by dense hyaline casts. The collecting tubules showed little damage to their epithelium but contained exudate and desquamated cells. The newformed connective tissue was fairly rich in cells and there was round-cell infiltration in one case. The newly formed elastic tissue was found only around the damaged glomeruli outside the thickened basement membrane, and in some cases it seemed to be continuous with the elastic tissue in the walls of the small arteries. There was some deposit of calcium salts in the medulla in two cases, and rich deposit in both medulla and cortex in two cases.

The results obtained in this group show very definitely that following a series of subacute attacks of nephritis such as is produced by uranium nitrate there is marked and permanent damage to the kidneys. The marked increase in the interstitial tissue, the extreme