

Recollections as told by Alton Moore

### **B. (Birdsall) Holly Broadbent**

Eager to enroll as a student of Edward Angle, Broadbent was concerned that he would not be capable of successfully passing Angle's entrance exam, in particular, the cranial osteology section. Hoping to improve his knowledge, Broadbent sought out a dental student teaching assistant position in the anatomy department at Case Western Reserve University under the chairman, Dr. T. Wingate Todd. Broadbent's knowledge grew as did his interest in Todd's research on long bone skeletal maturation standards, an interest that would later provoke Broadbent's future study of skull maturation standards.

Fortunately, Broadbent passed Angle's test, completed his orthodontic training, and then returned to Cleveland to practice, teach at Case, and again conduct research with Todd. They first focused on measuring skulls within a calibrated square box. Ear rods held the skull laterally immobile with a third rod touching at orbitale to stabilize and orient the Porion - Orbital plane horizontal (Frankfort Horizontal). To minimize enlargement, the head plate was positioned as close to the skull as possible while the x-ray source was positioned as far as possible given the apparatus available at the time. A 5' distance from source to mid-skull gave an acceptable compromise of 7 percent enlargement and the apparatus fit comfortably in a typical dental operatory. A near exact reproduction of the skull onto radiographs was achieved, but it was a frustrating dead end since significant engineering would be needed along with precise machining to transfer the concept to a living patient. The \$20,000 engineering cost in the midst of the Great Depression of the 1930's effectively shelved the idea.

In his spare time Broadbent enjoyed being a Boy Scout Master working with children and adolescents. One of his Scouts was injured and paralyzed in a swimming accident. Broadbent often visited the child in the hospital and helped him through his mental and physical trauma and depression. The parents were profoundly grateful for Broadbent's devotion and wanted to reward him somehow. They eventually went to Todd for suggestions and were told of the financial need for the development of a working cephalometer. The Bolton family had the resources and continued to fund and aid Broadbent's life work.

Following Todd's practice of regular measurement of growing children, Broadbent started to accumulate a registry of serial cephalometric radiographs. He wanted children of good health, normal development, and parents who were willing to allow cephalometric radiographs to be taken at regular intervals starting near birth. But who would want their child to be subjected to such a long term study with little to no gain to them? Once again, the Bolton family came to the rescue. The word went out to the local country clubs, bridge clubs, and private schools that only 'normal' children could participate. All others need not apply. That psychology worked well and resulted in the greatest collection of untreated child development records in cephalometric history. See: Broadbent, B.: AO 1:45-66, 1931.

PS from Bob Little: Al told me that teaching his graduate orthodontic students was his greatest pleasure. This story of Broadbent was an example of how Al wove concept, history, and yarn into a typical lecture. What a great mentor to his decades of students and personally to me. I

did not realize it at the time, but we young 'greenhorn' instructors, like Don and me, were being gently pushed, pulled, smoothed, and shaped. Al was never critical of us and was always encouraging plus he gave us an example of what teaching style is all about. We were so fortunate to grow under his wing.