I recently returned from Sweden and wish to tell you a bit about my travels there. I was fortunate to be given the opportunity to apprentice with a master blacksmith near Kopparberg under the Viking Connection’s apprenticeship program. The apprenticeship was 2 weeks in duration and was easily the best educational experience of my life as a blacksmith. My primary focus was on ironworking as it would have been done during the Viking Age, using tools and techniques appropriate to this period. Kopparberg is located to the north and west of Stockholm and has a rich history closely associated with many aspects of metalworking. The town derives its name from the copper mines that have been in operation in the area since the mid 17th century. Prior to this the region had been known for an abundance of iron ore along with the refinement of this ore into useable iron. A highlight of my experience was actually travelling to a nearby bog with 3 other smiths and mining our own sample of bog iron ore. Archeologists believe that mining has been carried on in this region for at least 2,500 years!

My education began with the detailed construction of a Viking Age forge using the materials at hand such as would have been done 1,200 years ago. Proper amounts of clay, sand and a grass binder were mixed together with enough water to give a workable consistency so that the material could easily be shaped into the forge. Careful attention was given to the size and contour of the forge during construction. These were factors that I had vague knowledge of prior to this experience but that have a huge impact on how effectively the forge heats. Then attention was turned toward the pair of single bellows that provide the air supply to the charcoal fire in order to provide the intense heat necessary for ironworking. Although I had prior experience with these bellows I again found that I had much to learn. The size of the intake valves in relation to the output nozzles and also the positioning of the nozzles to the forge being of critical importance to effective performance of the forge. The knowledge I gained took me from the point of being able to operate a traditional forge with a “hot fire” to the level of producing a Viking age forge fire capable of carrying out all aspects of
age-appropriate ironworking. With the forge, bellows and stump anvil all in order and protected by a simple canvas canopy I was ready to begin work. I was generously given a portion of a wrought iron bloom that I refined and welded into a small bar of high grade wrought iron. At this point the bar was suitable for further forging into items such as nails, rivets or possibly used as a component in blade construction. A similar wrought iron bar was manipulated in the forge whereby it was converted to steel with a high enough carbon content to allow full heat treating including hardening and tempering. This material would have been completely suitable for producing high grade cutting edges on tools of all kinds including knives and axes during the Viking Age! I then went on to use the forge to weld up billets consisting of wrought iron and carbon steel which were forged into small knife blades.

Working under the highly skilled and critical eyes of a master blacksmith allowed me to begin to take my craft to a much higher level. I was guided through the importance of correct hammer weight and control of the hammer during different forging operations as well as attention to the fire and correct levels of heat. My increased attention to these details will allow me to improve the efficiency of my forging as well as the quality of my finished work. With any craft, the level of proficiency is on a continuum and I am excited to strive upwards to new levels of ability. I am unable to express enough what a tremendous experience this was for me. For others who may take advantage of similar opportunities I would recommend giving yourself some extra time for travel and exploration. I was fortunate to have my wife and a daughter accompany me on adventures to several countries and many major European museums prior to beginning my apprenticeship. Seeing and photographing original artifacts from the Viking Age will have a major impact on my future work. I want to graciously thank Viking Connection for providing this incredible opportunity. I strongly recommend others to pursue similar experiences as able. I look forward to sharing my new knowledge in upcoming seminars and demonstrations throughout the coming year and hope to visit with many of you in person!